The Journal
of the
South Carolina Medical Association

VOLUME XLIV September, 1948 NUMBER 9

The Prevention And The Treatment Of Acute Cholecystitis

GEORGE H. BUNCH
Columbia, S. C.

In this paper we shall show that acute cholecystitis is a more serious disease than has been thought, that in the cases that have been treated conservatively there is a high incidence of gangrene of the gall bladder with perforation and a commensurately high mortality rate, that early operation after dehydration has been overcome and errors in blood chemistry have been corrected gives the patient a better chance of survival, that the majority of the cases of acute cholecystitis may be prevented by the prompt removal of all gall bladders containing stones and, finally, we shall discuss the surgical management of the acutely diseased gall bladder.

Heuer[3] in 1937 collected from the literature 500 cases of acute cholecystitis that had been treated medically. In 20% of these gangrene and perforation had occurred with 45.5% mortality. Cowley and Harkins[2] in 1943, in a review of the literature for 1924 to 1942, found 2261 cases of acute cholecystitis of which 13% had perforated with a mortality rate of 20.8%. Glenn[6] in 1947 reported that in the New York Hospital over a period of 16 years, from September 1, 1932 to September 1, 1946, 555 cases of acute cholecystitis were operated upon. In the 187 patients over 50 years of age the mortality rate was 6.1%, in those under 50 years, 1.08%. He says, "In those patients over 50 years the temperature, the leucocyte count and even the clinical picture frequently do not parallel the pathological process which is taking place within the gall bladder. It is in this group particularly that we feel early surgery is imperative."

Johnstone and Ostendorph,[1] in a series of 12,000 consecutive autopsies done at the Los Angeles County Hospital from April, 1936 to January, 1942, found 32 cases of perforation of the gall bladder, an incidence of 0.26%. Of these 43% had free perforation without walling off. In 4 cases there was perforation into the duodenum and in 1 of these there was also a perforation into the jejunum. In 84% of the cases with perforation stones were found in the gall bladder or ducts, showing the great frequency with which acute cholecystitis and perforation occur in long standing chronic biliary disease. Forty-nine per cent of the cases treated medically died of perforation and peritonitis unrecognized and undiagnosed until at autopsy. They also report from 2 hospitals in Los Angeles a series of 105 cases of acute cholecystitis in which cholecystectomy was done in 86 and cholecystostomy in 18 with an overall mortality rate of 8.5%, showing, contrary to the usually accepted belief, that acute cholecystitis ranks high among the acute abdominal diseases as a cause of death.

Such statistical studies definitely prove that complacent waiting in acute gall bladder disease until the cooling off period has passed when an interval operation may be done with comparative safety is a fallacy with no more factual basis than there is in delaying operation in acute appendicitis. As the public and the medical profession have learned the danger of procrastination, of catharsis and of delayed operation in appendicitis the percentage of late cases with perforation already present when first seen by the surgeon has steadily declined with a corresponding fall in the death rate. In an earlier series of appendicitis cases operated upon by us 20% had already perforated. At the present time, 12% have perforations at operation.

The etiology of acute cholecystitis has an important bearing on its prevention. The duodenum, the pancreas, the liver and the biliary system are embryologically derived from the same segment of primitive

---

Read before the South Carolina Medical Society, Charleston, S. C., April 27, 1948.

gut and throughout life are related in function and in predisposition to disease. An influx of pancreatic juice into the gall bladder results in acute cholecystitis and, conversely, pancreatitis follows the escape of infected bile into the pancreatic duct. Chronic pancreatitis is a common complication of chronic gall bladder disease and there is an increased incidence of gall stones in diabetes.

Stones are found only in diseased gall bladders and, stones even though silent and symptomless, are not harmless. Even when not obstructive, they in time result in progressive degenerative changes in the liver, the pancreas and the kidneys that shorten the life of the patient. In 72+% of our cases acute cholecystitis has occurred as a complication of chronic cholecystitis with stone. When this develops there is increased hazard of perforation, peritonitis and death.

Furthermore, 90% of the gall bladders developing cancer have stones which is perhaps the best example in the human of chronic irritation causing malignancy. Samburg and Garlock,[16] February, 1948, report having operated upon 65 out of a series of 75 cases of carcinoma of the gall bladder with only 1 survival at the end of 3 years. They conclude, "This in addition to other frequently fatal complications of cholelithiasis, constitutes an obligation to remove all calculus gall bladders, in the absence of surgical contra indications." The internist who persists in treating a patient with gall stones by any sort of dietetic or conservative regime assumes an unwarrented responsibility.

We have yet to see a case of chronic cholecystitis in which the disease has been initiated by an attack of acute cholecystitis of sufficient severity to be recognized clinically but, paradoxically, the majority of the cases of acute cholecystitis, in our experience, occur as complications of chronic gall bladder disease and lithiasis of long duration.

Whipple[4] says, "In the pathogensis of every lesion of the gall bladder and bile ducts requiring surgical therapy 3 factors will be found, singly or in combination:

1. A disturbance in the normal metabolism of the ingredients of bile, especially in the bile salts-cholesterol ratio resulting in inflammation or gall stone formation or both.
2. Infection by bacteria.
3. Obstruction with bile stasis."

Even in cases of acute cholecystitis in which infection is not the primary factor it supervenes and plays an important secondary role. Rosenow has stressed the frequency of infection by streptococci. One of our cases of acute cholecystitis without stones followed a furuncle on the hand.

The role of the typhoid bacillus in gall bladder disease has been important. In typhoid carriers the organism remains indefinitely in the gall bladder and stones have been found to harbor typhoid bacilli in their centers for many years. In an earlier review of cases we reported having drained with recovery an empyema of the gall bladder in a white girl 9 years old ill with typhoid fever. Of 30 cases reported by Keen[5] in 1898 of perforation of the gall bladder in acute typhoid cholecystitis 3 recovered and 27 died. All those that recovered were operated upon. The undeveloped state of gall bladder surgery then is shown by his description of the operative technique employed. "If the walls of the gall bladder in the neighborhood allow it, one or two rows of Lembert sutures, inverting the peritoneal coat is the method of repairing the perforation, should this not be possible, then the best plan would be circular packing around the opening with iodeform gauze, so as to form a defensive wall for the abdominal viscera, leaving in the center a sort of well leading down to the perforation. This should be separately packed. The incision should never be entirely closed, drainage being essential."

We now know typhoid to be a preventable disease that is disappearing from civilized countries. Would that the role of the colon bacillus in biliary infection might be as effectively eradicated. Dehydration and urinary stasis have long been recognized as factors in the formation of urinary stones but the causative effect of bile stasis in the development of gall stones is not yet appreciated. We are convinced that concentration from dehydration and stasis changes the composition of bile, predisposes to infection and results in stone formation. In our work it has several times been the cause directly or indirectly of acute cholecystitis developing in patients already having chronic gall bladder disease. Many years ago we removed an acutely diseased non calculus gall bladder from a man who had been immobilized four weeks in a body cast for fractures of both femurs. We worked through a window in the cast. There was no history of previous gall bladder disease. He recovered. We have also operated for acute cholecystitis upon two fat women of middle age who had been confined to bed with Buck's extention applied for leg fractures. Both gall bladders contained stones. Unless such patients are kept hydrated and made to exercise in bed there is bile stasis, particularly in the aged. Glenn,[6] at the 1947 meeting of the American Surgical Association, reported a series of 17 cases that developed acute cholecystitis following surgical procedures unrelated to the biliary tract. We believe bile stasis from loss of muscle tone and lack of exercise plays an essential part in the relative frequency of gall bladder disease in women as compared to men, in fat women as compared to thin women and in white women as compared to negro women.

The first surgical operation upon the gall bladder, cholecystotomy, was performed by Marion Sims[15] for acute cholecystitis in 1878. Because it gives better relaxation and is safer we prefer spinal anaesthesia in gall bladder surgery and ordinarily use, except in

cases that are not jaundiced, the transverse incision. With it closure is without tension and the wound heals at rest. There are less respiratory embarrassment and fewer chest complications; breathing is deeper, pain is less. In many patients, because of edema and induration, the ducts in acute inflammatory disease of the gall bladder are not readily identified and may be satisfactorily visualized only at a considerably increased hazard. In such patients, in the absence of jaundice or of a palpable stone, we think it unwise to explore the common duct. Gangrene of the gall bladder from thrombosis of the cystic artery is not rare. If there is also necrosis of the cystic duct it may be impossible to ligate either the duct or the artery particularly in obese patients. In no case in which this has occurred has there been secondary hemorrhage and in the absence of obstruction of the common duct healing has been without bile drainage.

The patient with acute cholecystitis is acutely ill and should be operated upon early but not until dehydration has been overcome and electrolytic balance restored. The great majority of these patients are in the middle and in the old age groups. At operation the primary indication is to save life by adequate drainage of the septic gall bladder. Only if the patient's condition permits should its radical removal be attempted. In patients operated upon within 48 hours of onset the gall bladder may often be totally removed without undue trauma and without bleeding. In suitable cases it may readily be separated from the liver along a relatively avascular line of cleavage. As a rule, however, particularly in late cases of acute cholecystitis total removal of the gall bladder is difficult and hazardous. It is now known that after simple drainage the gall bladder wall remains infected and that 50% of the patients having cholecystostomy, in order to be cured, must have subsequent cholecystectomy. Cholecystostomy is in effect a palliative, not a curative procedure. Because of these facts several methods of performing subtotal cholecystectomy have been suggested. These have the curative effect of total removal without its hazards. Such procedures must be accomplished with minimal dissection and without shock.

Martin[14] in 1920 and again in 1926, in 7 cases of empyema of the gall bladder in which classical cholecystectomy might not be safely done, reported having split the gall bladder from end to end and applied tincture of iodine to destroy the mucosa.

Gatch[7] in 1930, after walling off the gall bladder with moist pads and aspirating its fluid contents, opened the fundus, removed any stones that were present, split the gall bladder from fundus to ampulla, destroyed the mucosa by the application of moist swabs wrung dry after having been dipped in pure carbolic acid (or by the actual cautery), and sutured with fine catgut the walls of the gall bladder after they had been folded around a soft rubber catheter which had been placed for drainage to or perhaps for a short distance into the end of the cystic duct.

Heyd[8] in 1935, by a similar technique, split the gall bladder and removed the mucosa by stripping. Thorek[9] in 1935 advocated in all cholecystectomies, acute and chronic, electro coagulation of the wall after the gall bladder had been opened its entire length. Closure was without drainage. Bailey and Love[12] in 1939 report having done 129 cases by the Thorek method with no deaths. Pribram[10] in 1928 practiced mucoclasis instead of cholecystectomy. After aspiration he destroyed the gall bladder mucosa by means of an electrode placed in the lumen. Wound closure was without drainage. Whitaker[11] in 1935, used the high frequency current to destroy the mucosa in a procedure he called electro surgical cholecystectomy.

Carpenter and Vale[13] in 1942 reported 47 cases of acute cholecystitis operated upon, by the Gatch method of using carbolic acid for the destruction of the gall bladder mucosa, with a mortality of 8%. Of the 34 patients contacted 18 had Graham Cole examinations from 6 months to 4 years after operation. Of the 18 seven were visualized in varying concentrations of the dye (39%). Some of the gall bladders which did not function before operation were now visualized. In 6 to 9 months the mucus membranes of experimental dogs operated upon by this method appeared normal except for fibrosis.

In our work we have modified the Gatch method of using carbolic acid in chemical cholecystectomy in 2 essential ways: 1st—after splitting the gangrenous gall bladder from fundus to ampulla we remove all the wall except the narrow strip that is attached to the under surface of the right lobe of the liver; 2nd—the mucous membrane of this may be stripped off or it may be destroyed by leaving in contact with it a strip of gauze wrung dry after having been dipped in carbolic acid. The gauze, with a protecting rubber dam, forms a cigarette drain which is removed on the 6th post operative day. We believe prolonged contact of the acid with the mucosa destroys all surface and glandular epithelium. Leaving only the portion of wall that is attached to the liver makes reformation of the gall bladder mechanically impossible. To prevent necrosis and stricture of the bile ducts there should be no excess acid to gravitate downward and pool about them. We have found this procedure to be a relatively safe, satisfactory way to treat acutely diseased gall bladders. It combines the benefits of cholecystectomy with the safety of cholecystostomy. Of the patients operated upon all have done well post operatively and those having gangrenous gall bladders done in this way but without the use of the acid have also done well. We wonder what the effect would be if the posterior wall of an untreated normal gall bladder were left attached to the liver. The gall bladder secretes mucous which, if not absorbed by the peritoneum until the glands secreting it had atrophied, would form an intraperitoneal cyst.

Of the 61 patients having acute cholecystitis

operated upon by us in the decade from January 1, 1938 to January 1, 1948 all were white, showing the rarity of gall bladder disease in the negro race; 13 were males, 48 females, a proportion of about 1 man to 4 women. Stones were found in the gall bladder or ducts in 44 and not found in 17, a relative incidence of more than 2½ to 1, showing the importance of the removal of gall bladders with stones in the prevention of acute cholecystitis. Of the 60 cases 2 were between the ages of 20 and 30, 7 between 30 and 40, 7 between 40 and 50, 22 between 50 and 60, 13 between 60 and 70, 4 were over 70, in 4 the age was not given. The youngest patient was 21, the oldest 77, almost 70% have been 50 or older. There has been no case in which cholecystostomy was done. The carbolic acid technique of subtotal chemical cholecystectomy that we have described was used in 12 patients and the posterior wall of the gangrenous gall bladder was left without the application of carbolic acid in 4, all 16 recovered. Classical cholecystectomy was done in the remaining 45 cases with 6 deaths, a mortality rate of 13-1/3%.

All deaths have been in patients approximately 50 years of age or older:

1. A woman, 48 died on the 16th post operative day of septicemia from a complicating abortion. This was before the days of penicillin and streptomycin.

2. A mentally deranged man, 59, after having had a boil on his hand for a week, developed acute cholecystitis. At operation no stones were found. On the 7th post operative day he suddenly died of pulmonary embolism.

3. A woman, 50 was admitted with temperature 105°, leucocytes 11,500, polys 87%. She had empyema of the gall bladder with stones. She died on the 2nd post operative day of anuria and toxemia.

4. A woman, 67, with subnormal temperature, 4500 leucocytes, 84% polys was admitted at 11 P. M. after having been taken acutely ill the same morning while riding in an automobile to the mountains. She was brought by ambulance to Columbia from a hospital in Spartanburg. On admission here she was acutely distended and had vomited repeatedly during the day. Her pulse was hardly perceptible. She was given glucose intravenously and continuous stomach suction through a nasal tube. Next morning, although she was in extremis, the gangrenous ruptured gall bladder containing stones was removed. Several quarts of bile were found in the free peritoneal cavity. She died in a few hours.

5. A woman, 50, was admitted with temperature 104°, 11,800 leucocytes, 83% polys. At operation she had a ruptured gall bladder with stones. She had extensive carcinoma of the gall bladder with secondary masses in her liver and died on the 2nd post operative day with temperature 108°, a liver death.

6. A woman, 61, with paraplegia following an apoplectic stroke 5 months previously was admitted with temperature 103°, 16,300 leucocytes and 85% polys. She did well for several days after the removal of an acutely infected gall bladder with stones, then the right leg became gangrenous, probably from circulatory block by an embolus, and she died after amputation of the thigh.

Several of the cases that have recovered deserve brief mention: one a woman who had acute cholecystitis apparently precipitated by hemorrhage into the gall bladder from erosion by stones into a branch of the cystic artery. Another woman at cholecystectomy was found to have a complicating pseudo myxoma peritonei from a ruptured mucocele of the appendix. Two cases have had subsequent laparotomies. A woman became mildly jaundiced 6 months after the removal of a gangrenous ruptured gall bladder without stones. At the 2nd operation a non faceted stone was removed from the common duct. Was the stone, overlooked at the 1st operation, a predisposing cause of the acute attack or had it developed in the common duct afterwards? She has done well since operation and has been relieved of jaundice. A woman, 69, had vaginal hysterectomy and perineal repair done June 28, 1947 for torn perineum, massive cysticele and rectocele. On July 15, 1947, while still in the hospital, she became acutely ill and was operated upon for a gangrenous ruptured gall bladder with stones after which she did well and was dismissed on August 4th, 1947. On December 3rd, 1947 she was readmitted with fever, and tenderness over the epigastrium. X-ray examination showed a right subphrenic abscess. This was drained, since which time she has remained well. In her, from bile stasis 20 *days after hysterectomy*, acute cholecystitis developed in a chronically diseased calculus gall bladder. Penicillin in massive doses did not control the infection. Hers is the only case in our experience that has had subphrenic abscess as a post operative complication of gall bladder surgery.

REFERENCES

1. Johnstone & Ostendorph—Cholecystitis with perforation. Archives of Surgery, 53-1-1. July, 1946.

2. Cowley & Harkins—Perforation of the gall bladder. S. G. & O., 77-661. December, 1943.

3. Heur—Factors leading to death in operations upon the gall bladder & bile ducts. Annals of Surgery, 99-881, June, 1934.

Surgical Aspects of acute cholecystitis. Annals of Surgery 105-758. May, 1937.

4. Allen O. Whipple—Surgery of the biliary tract. Operative Surgery edited by F. W. Bancroft. D. Appleton—Century Co. (Inc.), New York. 1941, section XVI—page 909.

5. Wm. W. Keen—Surgical complications & sequels of typhoid fever. W. B. Saunders—Phila-

delphia, 1898. Chapter XVI. Typhoid affections of the liver & gall bladder. Page 262.

6. Glenn, Frank—Acute cholecystitis following the surgical treatment of unrelated disease. Annals of Surgery. 126-4-411, October, 1947.

7. Gatch, W. D.—Chemical Cholecystectomy. Trans. Wesn. Surg. Assn. 1927, page 345. Trans. Sr. Surg. Assn. 1930, page 110.

8. Heyd, C. G.—Discussion of paper on perforation of acute cholecystitis. Annals of Surgery, 101-2-797, February, 1935.

9. Thorek, Max—The advantages of electric surgical obliteration of the gall bladder over clinical cholecystectomy. Int. J. Med. & Surg., 48:106, March, 1935.

Electro surgical obliteration of the gall bladder without drainage. Ill. Med. J. 78:211, September, 1940.

10. Pribram, B. O.—Surgical treatment of cholelithiasis (Mucoclasis) operation without drainage. Med. Klinik, 241, 1147, July 27, 1928, August 3, 1928.

11. Whittaker, L. B.—Electro Surgical cholecystectomy. New Eng. J. of Med. 213, October 3, 1935.

12. Bailey and Love—Electro surgical obliteration of the gall bladder without drainage. Brit. Med. J. 2:682, September 30, 1939.

13. Carpenter & Vale—Chemical cauterization of the mucosa of the gall bladder. Archives of Surg. 45, 6, 935. December, 1942.

14. Martin, E. D.—Cholecystostomy vs. Cholecystectomy. N. O. M&S J. 74:4, July, 1921.

Cholecystostomy vs. Cholecystectomy in cases of empyema of gall bladder? Sr. M. J., 19:198.

15. J. Marion Sims—Cholecystotomy in dropsy of the gall bladder. Brit. Med. J., June 1878.

16. Samburg & Garlock—Carcinoma of the gall bladder. Surgery, 23-2-201, February, 1948.

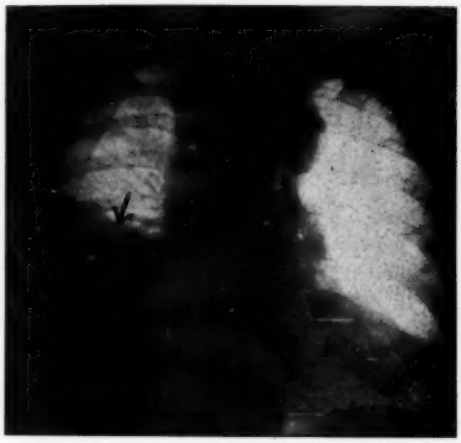


Plate No. 1—Dec. 29, 1947 shows right subphrenic abscess.

Plate No. 2—Jan. 6, 1948 shows that abscess has been adequately drained and that right lung is expanding.

A Clinical Consideration Of The Erythrocytic Sedimentation Rate

M. W. BEACH, M. D., Professor of Pediatrics,
CLYDE D. CONRAD, M. D., Teaching Fellow,
Medical College of the State of South Carolina,
Charleston, South Carolina,
and
JOHN R. HARVIN, M. D.,
Sumter, South Carolina

In any consideration of the sedimentation rate there are certain basic factors which should be recalled so that we shall have a clearer conception of physics and physiology as they are related to this test. Therefore, it may be worthwhile to refresh our minds with some of these facts. A cubic centimeter of packed red cells weighs about 1.09 grams and a similar volume of plasma weighs 1.06 grams. It is understandable that the red cells sink in the plasma. The rate of fall will depend upon the difference in weight of cells and resistance of upward pressure of plasma and it will become constant when these forces are equal to each other. The smaller the aggregate, the lesser the diameter, the lighter the weight, the slower the fall; for the resistance is proportional to its diameter, but its weight is proportional to the cube of its diameter. Therefore, discrete cells fall slower than their agglomoration, but amount of viscosity of plasma and other particles in the blood affect their rate of fall. Abnormal states in the plasma which interfere with its normal function of cell separation would cause rouleaux formation. This abnormal physical state of the plasma may be brought about by increasing the fibrinogen and globulin or by decreasing the albumin. Apparently certain fractions of protein maintain cell separation while others lead to rouleaux formation and thereby increase the sedimentation rate. However, there may be other factors connected or associated with the accelerated fall of red cells which do not lend themselves to our present day knowledge. But any destruction of tissue, infection or allergic state that alters the plasma proteins by increasing the fibrinogen and euglobulin usually will increase rouleaux formation. This abnormal physical state is the most logical explanation for the accelerated fall of these cells.

According to Fahrens, tissue destruction causes an accumulation of albuminous products in the plasma which upsets the suspension and electrolytic stability. Also, he believes that other factors such as specific gravity and viscosity of the plasma, shape and size, separation or agglomeration of red cells must be considered before an evaluation of this procedure can be of clinical significance.

The erythrocytic sedimentation test is of diagnostic value only when it completes a definite pattern of some organic disease. The test is non-specific and when considered alone is often misleading. It is a laboratory procedure and when used in conjunction with history, physical findings and clinical observation may be of diagnostic aid. Apparently there is some coordination between erythrocytic sedimentation rate and cellular destruction. It is their interpolation into the terms of physiology or pathology of the clinical case which may be pertinent in arriving at a correct diagnosis. With a good history and meticulous examination, clinicians make correct diagnoses in most instances. But in some of their cases a degree of doubt exists and for this reason there is a desire for quantative information which can be assessed in solving this problem. But these figures may be even more misleading unless the clinical evaluation is considered in the same category as other information relating to the patient. The sedimentation test, like most other laboratory procedures, is not specific of any clinical entity. But when considered as a unit of the necessary tests to be used in a given case it can be very helpful in arriving at a correct diagnosis and may be of equal value from a prognostic standpoint.

Since this knowledge has somewhat crystallized sufficiently to be of diagnostic aid many outstanding laboratory workers have formulated methods for executing the erythrocytic sedimentation rate. They are similar in principle, but different in some of their details. Therefore, the normal values will vary according to the method employed, which should always be designated by the laboratory. The rate of fall is generally expressed in terms of millimeters per hour. The methods of Westergren, Wintrobe and Cutler are in common use and each has formulated what he considers normal for men, women and children.

	Men	Women	Children
Westergren	0-15 mm.	0-20 mm.	Less than 10 mm.
Wintrobe	0-6.5 mm.	0-15 mm.	3-13 mm.
Cutler	0-8 mm.	0-10 mm.	

The specific techniques for these procedures are obtainable in any standard laboratory manual. It is simple in manner and can be executed by the average office personnel.

We have attempted to discuss some of the physics, physiology and pathology in connection with the erythrocytic sedimentation rate and now believe that

it may be worthwhile to try to correlate the application of the test with the clinical findings so that this procedure may be helpful in solving some of our diagnostic and prognostic problems.

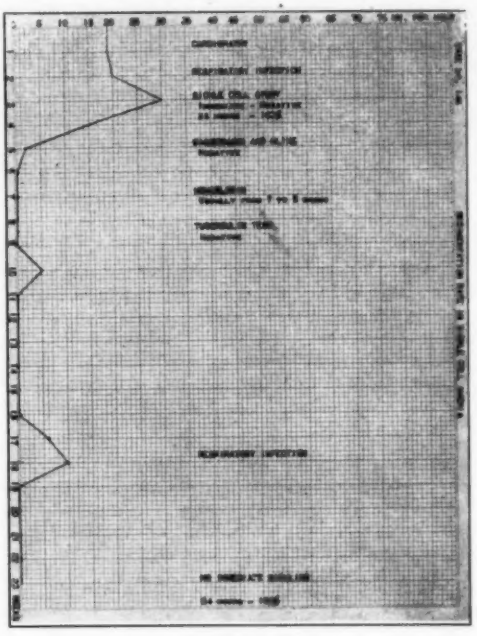
In most of the acute infections the sedimentation rate will be elevated, but will return to the normal range with recovery of the patient. Sometimes when the general examination does not indicate the presence of disease, an abnormal fall of the erythrocytic cells may be the stimulus for a more concerted examination and follow-up of the patient so that we may determine the exact cause of this increased sedimentation rate.

From a pediatric standpoint, we believe that the erythrocytic sedimentation test is more commonly used and is of greater clinical value in rheumatic fever, nephritis, tuberculosis and sickle cell anemia than in most of the other childhood diseases which one may contact in his practice. Therefore, it may be worthwhile to discuss some of these conditions a little more in detail.

Because of the high rate of occurrence of sickle cell disease in the colored race and because of the varied clinical picture which may somewhat simulate rheumatic fever, we should remember that this disease does produce myocardial pathology and that this development may change the normal physiological pattern and present a clinical picture not unlike that of rheumatic fever. This particular pattern may present a problem in differential diagnosis which may be difficult to solve unless we remember: (1) that the sickle cell phenomenon occurs only in the negro race; (2) that without complications it does not increase the sedimentation rate, but causes a slow fall; (3) that there is a more marked tendency of these patients to develop a severe degree of anemia and jaundice; (4) that in most instances sickling of the red cells can be demonstrated; (5) that there is a reticulocytosis and often demonstrable x-ray changes in the bones suggestive of this disease; (6) that there is a lack of response of these patients to salicylate therapy. Therefore, the erythrocytic sedimentation rate is very helpful in differentiating rheumatic carditis from cardiopathy of sickle cell disease.

It may be worthwhile to present a typical graph of sickle cell anemia, so that we may have a clearer conception of this laboratory procedure as a part of the clinical pattern of this disease.

The erythrocytic sedimentation rate may be of some value in following the clinical progress of children who have the primary type of tuberculosis. Many of these cases develop some of the early manifestations which are not unlike those seen in rheumatic fever. They are peevish, run a low grade fever, develop anemia, often complain of vague pains in the legs and of tiring easily. Frequently there is heard a soft, blowing systolic murmur. The weight graph may be downward, stationary or retarded. The intradermal tuberculin test may be one plus or more. The x-ray may or may not reveal any evidence of tuberculosis. In these types of

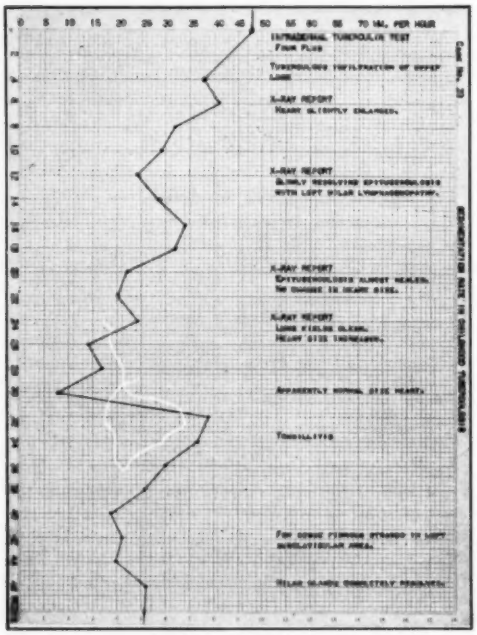


Case No. 145

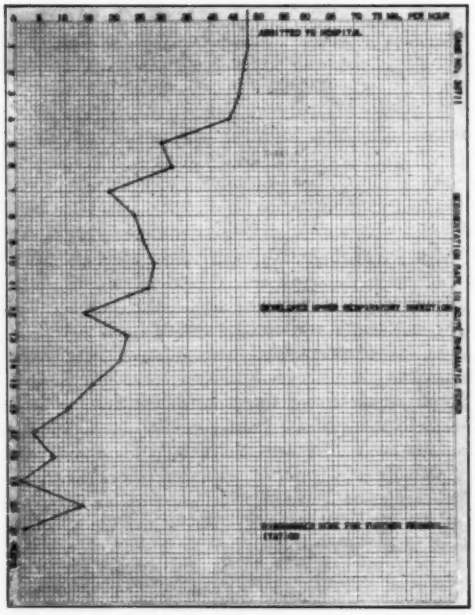
cases it is often difficult to tell whether we are dealing with an atypical type of rheumatic fever or an early type of primary tuberculosis. In this stage, both of these diseases may present an elevated sedimentation rate and without further observation and more definite patterns of these entities it may be extremely difficult to evaluate and correctly place this laboratory procedure. However, the sedimentation rate is of more definite value in determining the *activity* of the tuberculous infection and is often elevated even though there is x-ray evidence of healed lesions. We are presenting a graph somewhat suggestive of this type of case.

In rheumatic fever the erythrocytic sedimentation rate is elevated and it gradually returns to normal over a period of weeks or even months as the active process subsides. In 140 patients under observation in our Rheumatic Fever Clinic and considered to be in the acute phase of this disease, the average sedimentation rate was 20.8 mm./hr. One-hundred-and-forty-six patients in whom the rheumatic process had become quiescent showed an average rate of 7.6 mm./hr. The following graph is illustrative of the usual course of this disease.

Its great value lies in the fact that it may indicate continued activity when other clinical evidence is no longer present. A sedimentation rate that has returned to normal and remained within the normal limits for three to four weeks after salicylate therapy has been discontinued is generally accepted as a reliable indication that the rheumatic process is quiescent and that



Case No. 39

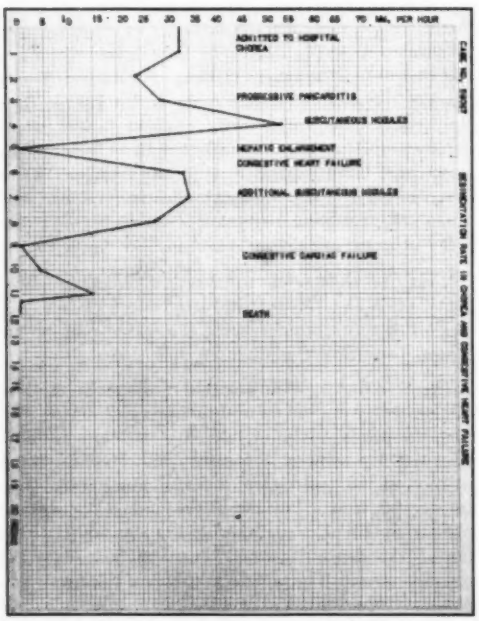


Case No. 36711.

graduated activity may be permitted. However, in the application of the sedimentation rate to determine the duration of bed rest following the acute stage, it is necessary to exclude other infections. From an economic and psychologic standpoint an unnecessarily prolonged period of bed rest is undesirable.

The erythrocytic sedimentation rate may be of aid in the evaluation of vague muscle and joint pains, commonly called "growing pains," or other equivocal symptoms of rheumatic fever in children. Systolic murmurs are frequently heard in the routine examination of children who are apparently well. Such murmurs may not be significant, but they deserve further consideration. In these cases an elevated sedimentation rate for which no other explanation is apparent suggests the possibility of rheumatic fever and indicates that the patient should have continued observation and examinations.

In severe cases of rheumatic fever, it has been observed that with the onset of congestive heart failure the previously elevated sedimentation rate tends to decrease to levels which would, in other circumstances, be considered normal. This decrease in sedimentation rate may precede obvious signs of failure and serve to warn the clinician of an impending cardiac break. If the heart failure is overcome, the sedimentation rate again rises to its former elevated level. This course of events is illustrated in the following graph which shows successive sedimentation rates in the case of a five year old colored female who was admitted to the hospital with chorea associated with a progressive pan-carditis, the development of subcutaneous nodules, and eventually the development of congestive heart failure and death. This case also



Case No. 59067

illustrates the fact that the majority of our patients with chorea have had an associated cardiac involvement and an elevated sedimentation rate.

BIBLIOGRAPHY

Todd, G. S., O. B. E., M. B., Ch. M., F. R. C. P.: The Blood Sedimentation Rate in Pulmonary Tuberculosis, The Practitioner, 157:36-37 (July, 1946).

Schlesinger, Bernard, O. B. E., M. D., F. R. C. P.: The Blood Sedimentation Rate in Rheumatic Fever, The Practitioner, 157:38-44 (July, 1946).

Obermer, E., M. D.: Clinical Value of Blood Sedimentation Rate (With a Plea for the Adoption of a Standardized and Simple Technique), The Practitioner, Vol. CLI, No. 1:43-48 (July, 1943).

Barnes, Arlie R.: Rheumatic Fever: A Summary of Present-Day Concepts, Medical Clinics of North America, p. 923-928 (July, 1945).

Harris, T. N., M. D.: The Erythrocytic Sedimentation Rate in Rheumatic Fever: Its Significance in Adolescent and Overweight Children, Am. J. of Medical Sciences, 210:173-181 (1945).

Gradwohl: Clinical Laboratory Methods and Diagnosis, Vol. 1, 3rd Edition (Mosby), p. 531-540.

Numbers, Alex A., M. D.: The Significance of the Sedimentation Rate to the General Practitioner, Canadian Med. Assn. J., 55:284-286 (1946).

Blaisdell, E. R., M. D., F. A. C. P. and Smith, I. E., M. D.: An Attempt to Ascertain the Clinical Value of the Rate of Blood Sedimentation; Based on a Study of 500 Unselected Patients, Maine Med. Assn. J., 33:72 (1942).

Lehman, Robert G., M. D.: The Blood Sedimentation Rate: Factors Influencing Its Determination and Interpretation, Ohio State Med. J., 41:233-236 (March, 1945).

Fox, Max J., M. D. and Evrard, John R., M. D.: The Sedimentation Rate As an Aid in the Diagnosis of Acute Poliomyelitis, Am. J. of Med. Sciences, 211:707-708 (1946).

Rosin, Sidney, M. D., Frank, William P., M. D. and Hamilton, Paul M., M. D.: The Sedimentation Rate and White Blood Count in Acute Poliomyelitis, J. of Pediatrics, 24:679-683 (1944).

Strickler, Albert, M. D. and Ginsburg, Theodore, M. D.: The Sedimentation Rate in the Eczema of Infants and Children, Urologic and Cutaneous Review, 20:274-276 (1946).

Winsor, Travis, M. D. and Burch, George E., M. D.: Sickle-Cell Anemia, "A Great Masquerader", J. A. M. A., 129:793-796 (Nov., 1945).

McBurney, Ralph, M. D., M. S., M. P. H.: A Clinical Evaluation of the Erythrocyte Sedimentation Rate, J. of the Med. Association of the State of Alabama, 12:166-169 (1942-43).

Apter, Leonard, M. D., Hull, Edgar, M. D. and Adams, C. C.: Maintenance of the Sedimentation Rate as a Test for Malignant Disease, Am. J. of Med. Sciences, 206:168-174 (1943).

Rubin, Mitchell I., M. D. and Waltz, Arthur D., M. D.: A Comparison of Routine Urinalysis, Addis Count and Blood Sedimentation Rate as Criteria of Activity in Acute Glomerulonephritis, J. of Pediatrics, 20:32-40 (1942).

Diggs, L. W., M. D.: Modifications in the Rourke-Ernstene Sedimentation Rate Method, Cleveland Clinic Quarterly, Vols. 12-13:127-133 (1945, 46).

Weisz, Albert, M. D. and Taran, Leo M., M. D.: The Finger Puncture Method for the Sedimentation Rate, J. of Pediatrics, 22:565-569 (1943).

Romanus, Torsten: Sedimentation Rate and Room Temperature, Acta Medica Scandinavica, 117:535-552.

McLean, Claude C., M. D.: Microsedimentation in Children, Sou. Med. J., 37:726-731 (Dec., 1944).

Della Vida, B. L.: The Sedimentation Rate and the Sedimentin Index, British Med. J., No. 4261:278-280 (Sept., 1942).

Rosen, Maurice S., M. D.: Extrinsic Factors Influencing the Sedimentation Rate, Am. J. Clin. Path., 16:681-692 (Nov., 1946).

Dickstein, Benjamin, M. D. and Wolfman, Irving J., M. D.: Sickle Cell Anemia: Recent Progress of Pediatric Interest, Am. J. Med. Sciences, Vol. 213 (1947).

Mitchell-Nelson: Textbook of Pediatrics, 4th Edition, Saunders, p. 1323.

Brenneman: Practice of Pediatrics, Vol. 3, 14:22.

Holt and McIntosh: Holt's Diseases of Infancy and Childhood, 11th Edition, Appleton Century, Pages 828, 1197 and 1306.

Kolmer: Clinical Diagnosis by Laboratory Examinations, 1st Edition, Revised, Appleton Century, p. 19-22.

Operative Treatment of Intestinal Obstruction

WALLACE, FURMAN T., AND COLVIN, E. M.
Spartanburg, South Carolina
From The Department Of Surgery
Spartanburg General Hospital

Intestinal obstruction can be treated effectively by operative means and without the aid of long tube decompression. The use of the Miller-Abbott tube and its modifications has contributed much to the treatment of intestinal obstruction. However, numerous technical difficulties have been encountered in the use of these long tubes. During the residency period of one of us so much time was spent in the manipulation of Miller-Abbott tubes, that all the surgical residents were barred from the fluoroscopic rooms because they were receiving excessive radiation.

The results of operative treatment with modern supportive care of intestinal obstruction but without the aid of the Miller-Abbott tube should be reviewed.

Source: In this hospital the radiologist was already receiving maximum exposure to radiation and could not take part in fluoroscopic manipulation. Especially because of technical difficulties without the aid of fluoroscopy, long tube decompression was not used in this series. The group used for this report includes all of our cases from July, 1945 until September, 1947 and are consecutive private cases in a general hospital and should be representative.

There were twenty-seven cases of acute intestinal obstruction during this period. Chart I gives a short case summary of the twenty-seven cases.

Discussion: Would long tube decompression have reduced the mortality in this group? The single death occurred as a result of the extension of a small area of thrombosis in the mesentery of the intestine. This was a case of advanced volvulus. After reducing the torsion, the blood supply of the intestine returned nicely, and the wall had good color. Because of adequate blood supply, it was thought that resection was not necessary. There was an area of thrombosis in the mesentery about 4 cm. in diameter. The involved bowel was short-circuited by a side to side anastomosis because of the possibility of stricture formation at one of the two areas of constriction. The post-operative course was satisfactory for four days. Then the patient went into shock, and the abdomen became distended and rigid. At operation it was found that the small area of thrombosis in the mesentery had extended to the superior mesenteric artery. The patient became moribund and was closed without any operative procedure and died two hours later in spite of intensive supportive therapy.

There are two factors which might have prevented extension of the thrombosis. Earlier operation may have reduced the chance of thrombus formation. Resection of the area of thrombosis in the mesentery with the involved intestine may have prevented spread. It is felt, however, that long tube decompression would not have prevented the mortality. It might have delayed operation even further and would not have affected the situation as far as the possibility of resection was concerned.

PRINCIPLES OF OPERATIVE TREATMENT

Recently much stress has been placed on the proper use of long tube decompression, but the principles of operative treatment have not received much attention. They will be reviewed at this time.

Pre-Operative:

(1) The level of the obstruction is ascertained as nearly as possible by careful history and physical examination and by x-ray findings.

(2) The abnormal metabolic state of the patient is corrected as much as can be done in the time that the situation permits. Large amounts of plasma are usually necessary. Total and fractional serum proteins and hematocrit studies may be of value, but the amount used is that necessary to give an adequate circulating blood volume. Dehydration is corrected and electrolyte loss replaced.

(3) A Levin tube is placed in the stomach and suction instituted, completely emptying the stomach before operation.

At Operation:

(1) The tube is left in place and suction applied intermittently during the operation. This prevents regurgitation of intestinal contents into the pharynx of the patient with possible subsequent aspiration.

(2) Spinal anesthesia has many advantages and has been used in all of our cases. Adequate relaxation is necessary and is hard to obtain with general anesthesia. General anesthesia combined with curare is an alternative.

(3) An adequate incision for exploration is made.

(4) After the abdomen is opened, the distended loops of bowel are avoided as much as possible and are not handled. Instead, the cecum is first located. If it is not distended, the terminal ileum is traced in a retrograde manner. This will be found to be empty and flat in cases of obstruction of the small intestine. This flat bowel is traced backward to the point of obstruction, handling the distended bowel as little as possible. It is sometimes necessary, however, when the bowel proximal to the obstruction is quite dilated,

to deliver it out of the peritoneal cavity before the point of obstruction can be visualized. The exposed dilated bowel is covered with warm saline compresses.

(5) The flat bowel is traced up to the point of obstruction, and the obstruction is released. If it is due to a band adhesion, this may be very simply the release of the band. Frequently a considerable portion, or several portions of the small intestine may be found to be adherent for a wide area with a volvulus in between. The obstruction is released, doing whatever is necessary, and the intestine delivered through the incision. At this point, considerable intestinal content usually passes the point of obstruction, and the flat bowel begins to fill.

(6) All areas are carefully peritonealized at the point where the intestine was adherent. In short areas this can be done by a transverse suture, bringing the serosal edges together. In some instances, plication of the intestine is of some value. By this procedure the intestine is folded, bringing adjacent portions of intestine side by side and suturing them there by easy loops, making the folds so that there are no sharp angulations. Extensive raw surfaces may be covered by this procedure of plication. In other instances, the portion of intestine with an extensive raw surface may be wrapped in omentum and left with the omentum to become adherent to the raw surface.

(7) In any case of obstruction, after the obstruction has been released, the intestine is held up and the mesentery inspected down to its root. If this is not done, a twist of the mesentery may be overlooked. If a volvulus is present, the condition is corrected, using whatever procedure or maneuver is necessary.

(8) If the closure presents considerable problem because of marked distention, it is advisable at this point to decompress the intestine. This may be done in the following manner: A short McBurney incision is made and the appendix delivered. The peritoneum is closed around the base of the appendix and this incision is closed, leaving the tip of the appendix protruding. One member of the operative team isolates himself in a small area away form the main operative field. The tip of the appendix is clipped off and a catheter inserted into the cecum. If necessary, this catheter may be threaded up into the ileum by one of the other members of the operating team working from within the abdomen. A long section of the intestine can be threaded on the catheter, with decompression by suction applied intermittently as the catheter is threaded on. By this maneuver the amount of distention can be greatly reduced and the incision closed with ease.

In cases where the appendix has already been removed, or in cases where it is not readily delivered or seems too small, the most accesible portion of the cecum is sutured to the peritoneum through the McBurney incision, thus isolating that portion of the cecum from the general peritoneal cavity. The main field is protected from contamination, and the cecum is opened after placing a purse-string suture and a large rubber tube inserted in the cecum. If additional decompression is necessary, this tube may be threaded into the ileum, and again the maneuver of threading the intestine on the tube can be done. In either case, the tip of the tube is left in the cecum and serves as a valuable aid in decompressing the patient postoperatively.

After all distention has subsided, the bowels are moving normally, and the condition of the patient is good, the tube may be removed. If cecostomy without appendicostomy has been used, the tube is removed when the suture holding the tube in place has been absorbed.

If one is ready to remove the tube, but the suture is still holding it, traction with a rubber band is applied to the tube so that the suture gradually sloughs through the wall of the intestine or the peritoneum to which it has been sutured. Traction may be replaced or adjusted when necessary. The traction is applied by fastening the rubber band to the skin with adhesive.

In cases where an appendicostomy has been used, preserving the appendix, the appendix is pulled up with the tube still in place, and by blunt dissection and traction the base of the appendix is exposed. A tie is placed there and the tube slipped out. The appendix is tied off with two chronic ligatures and amputated. A drain is left to the appendix stump. The peritoneal cavity is not opened during this procedure. Although a fecal fistula may develop, it has not done so in any of our cases and should not prove troublesome or last very long if it should develop.

(9) The principles of operative treatment of the usual obstructions of the colon, cecum, and rectum will not be discussed at this time. In the preceding section it was noted that the cecum is picked up first. If it is found to be distended, an unexpected obstruction of the colon is probably present. The remainder of the colon is rapidly examined to determine the level of the obstruction and to rule out volvulus. In this type of case it is usually advisable to decompress by cecostomy or appendicostomy and leave definitive measures or complete diversion of the fecal stream until later.

Discussion: The principle of careful peritonealization to reduce the number of adhesions and to avoid future obstruction should be emphasized. This principle is important in any phase of abdominal surgery. All abdominal operations in a one year period (1946) were reviewed. In 220 consecutive abdominal operations, giving attention to avoiding raw surfaces, one case of post-operative obstruction has occurred up to the present time and is included in the previous discussion. The obstruction incidence was 0.4 per cent. It is unlikely that any cases of obstruction were over-

Number	Age Sex	Diagnosis	Associated Conditions	Operation	Result
117,682	26 Female	Volvulus of ileum, gangrenous.	None	Resection of ileum with side to side anastomosis.	Recovered
127,256	58 Male	Spontaneous perforation of diverticulum of colon with abscess formation and complete obstruction of recto-sigmoid junction.	Arteriosclerotic Heart Disease.	Colostomy. Incision and drainage of pelvic abscess. Closure of colostomy.	Recovered
129,349	8 weeks Male	Imperforate Anus, with small fistula.	None	Anastomosis, rectum to skin.	Recovery with good function
129,701	35 Male	Inguinal hernia, incarcerated.	None	Reduction of intestine resection of strangulated omentum. Herniorrhaphy.	Recovered
128,143	1 Year Male	Incarcerated inguinal hernia, with strangulation of ileum.	None	Reduction of ileum. Herniorrhaphy.	Recovered
133,416	6 months Male	Intussusception.	None	Reduction of intussusception.	Recovered
134,388	Newborn Female	Imperforate Anus.	None	Repair of imperforate anus.	Recovery with good function
130,507	7 months Female	Intussusception.	None	Reduction of intussusception.	Recovered
68,049	38 Female	Complete intestinal obstruction due to post-operative adhesions.	None	Release of adhesions.	Recovered
104,057	48 Male	Complete obstruction of sigmoid due to ruptured diverticulum.	Diabetic acidosis with coma.	Appendicostomy. Appendectomy.	Recovered
10,547	40 Female	Volvulus of small intestine with intestinal adhesions. Mesenteric thrombosis, massive.	None	Release of intestinal adhesions and volvulus and intestinal anastomosis. Exploratory Laparotomy.	Died (See discussion in text.)
136,011	30 Male	Ruptured diverticulum of colon with abscess formation and complete obstruction of sigmoid colon.	None	Wangensteen suction and antibiotics. Sigmoidoscopy. Biopsy.	Recovered
132,079	7½ months Male	Intussusception.	None	Reduction of intussusception.	Recovered
138,992	50 Male	Incarcerated hernia with strangulated ileum.	None	Reduction of ileum. Herniorrhaphy.	Recovered
112,679	Newborn	Atresia of rectum.	None	Anastomosis of sigmoid to gluteal skin. Plastic construction of anal canal.	Recovered
83,307	30 Male	Intestinal obstruction, partial, due to adhesions.	None	Release of adhesions.	Recovered
140,136	29 Male	Appendicitis. Volvulus of small intestine, post-operative with complete obstruction.	None	Appendectomy. Exploratory laparotomy with reduction of volvulus.	Recovered
142,071	2 years Female	Intussusception.	None	Reduction of intussusception.	Recovered
90,798	56 Male	Incarcerated right inguinal hernia with strangulation and gangrene of portion of ileum, Meckel's diverticulum and portion of the bladder.	None	Resection of 18 inches of ileum. Resection of Meckel's diverticulum. Partial resection of bladder. Herniorrhaphy. Supra-pubic cystotomy. Orchidectomy.	Recovered
143,637	Newborn Male	Congenital atresia of ileum.	None	Intestinal anastomosis. Cecostomy, tube passed up through stoma of anastomosis 5 days later.	Recovered
142,772	2 years Male	Intussusception.	None	Reduction of intussusception.	Recovered
14,067	61 Female	Ruptured diverticulum of colon with abscess formation and complete intestinal obstruction.	Urinary tract infection.	Cecostomy. Closure of cecostomy.	Recovered
121,069	29 Female	Intestinal obstruction due to adhesions from chronic peritonitis of undertermined etiology.	None	Release of adhesions.	Recovered
144,036	55 Female	Intestinal obstruction due to adhesions with volvulus.	This was third episode of complete obstruction due to adhesions, requiring operation. Peritoneal cavity almost obliterated.	Release of intestinal adhesions. Reduction of volvulus.	Recovered
139,802	6½ Male	Intussusception.	None	Reduction of intussusception.	Recovered
128,938	32 Female	Partial intestinal obstruction due to adhesions.	None	None-Wangensteen suction with Levin tube relieved compression.	Recovered
130,365	8 months	Intussusception.	None	Reduction of intussusception.	Recovered

looked since no deaths occurred from other causes.
Post-operative:

(1) Wangensteen suction is again used in the post-operative period until distention subsides.

(2) The intestine is kept at rest as far as possible with morphine at regular intervals.

(3) Oxygen is usually a valuable adjunct during the immediate post-operative period

(4) A proper fluid balance is maintained. The total serum protein is kept at normal level by use of plasma. Adequate amount of amino acids for nutrition are supplied intravenously. Glucose is given, using an isotonic solution, in order to preserve the vein.

(5) Only a sufficient amount of sodium chloride is given for the daily requirement and to replace that lost by stomach suction. Wangensteen[1] has done extensive work in this respect, and from his report, it seems that as a general rule 1000 cc. of normal saline daily provides an adequate saline intake with stomach suction in place.

(6) Large amounts of all of the vitamins are given parenterally.

(7) The usual post-operative regime of leg exercises and deep breathing is instituted.
Discussion:

Careful attention must be given to the daily intake of sodium chloride. If too much is given, subclinical or clinical edema will result, with the danger of acute pulmonary edema. Edema occurs early in the region of the operative incision and interferes with wound healing.

Another detail that requires constant attention is the protein level. The total serum protein must be maintained at normal levels by plasma and sufficient animo acids for nutrition supplied parenterally. Another check on fluid balance that will probably be of considerable value in the future is the dye concentration test of circulating blood volume.

SUMMARY

Some of the principals of operative treatment of intestinal obstruction are discussed.

BIBLIOGRAPHY

1. Wagensteen, Owen H., The Surgeon and His Trust, *Surgery, Gynecology, and Obstetrics*, 84-4A, 567-578, April, 1947.

PEE DEE SOCIETY CENTENNIAL

The Pee Dee Medical Society (composed of physicians from the counties of Chesterfield, Darlington, Dillon, Florence, Horry, Marion, and Marlboro) will celebrate its centennial in Florence, October 14, 1948. Speakers at the scientific session (beginning at 3 p. m.) will consist of physicians born in South Carolina who have become outstanding in national medical circles. Those who are expected to speak are; Dr. Louis Buie of the Mayo Clinic, Drs. Oscar Bethea and Mims Gage of New Orleans, and Dr. Eugene Pendergrass of Philadelphia. Dr. Buie will also be the guest speaker at the banquet which begins at 7:30 p. m.

Such records as are available show that the Pee Dee Medical Society was in existence in 1849 and that it was probably formed before that time. It thus antedates the South Carolina Medical Association, and is second only in age to the Medical Society of South Carolina (Charleston Medical Society) amongst the medical organizations of the state.

The Society extends a cordial invitation to all physicians throughout the state to attend the meeting. Those planning to attend should notify Dr. Rowland Zeigler, Florence, so that a place will be reserved.

The Journal of the South Carolina Medical Association

EDITOR: Julian P. Price ---------- Florence, S. C.

EDITORIAL BOARD

J. I. Waring ---------- Charleston
D. F. Adcock ---------- Columbia
C. J. Scurry ---------- Greenwood
R. M. Pollitzer ---------- Greenville
W. J. Henry ---------- Chester
W. R. Mead ---------- Florence
J. J. Chandler ---------- Sumter
O. Z. Culler ---------- Orangeburg
G. D. Johnson ---------- Spartanburg

BUSINESS MGR.: Mrs. C. G. Watson ---------- 105 W. Cheves St., Florence, S. C.

Please send in promptly notice of change of address, giving both old and new; always state whether the change is temporary or permanent. Original manuscripts, subject to approval by the Editor and the Editorial Board, are desired for publication in the Journal. They should be typewritten, double spaced, on 8½ x 11 paper. References should be complete, and only such as relate directly to statements quoted in the paper. Illustrations will be used as funds permit, or as authors are willing to bear the necessary increase in cost. Short original articles are preferred to long reviews.

Office of Publication: (In care of the Editor) ---------- Florence, S. C.
Subscription Price ---------- $3.00 per Year

SEPTEMBER, 1948

1086

As the directory goes to press we find listed 1086 members of the Association. This is an all time high. According to recent information received from the American Medical Association, there are in the neighborhood of 1550 living physicians in South Carolina. A number of these are colored physicians, others are internes in hospitals, and some are physicians who have given up the practice of medicine. After deducting this group, we estimate that ninety percent or more of those physicians who are eligible for membership in our Association are now members in good standing.

Assembling and arranging the data for the Directory has been no mean task. As this is being written, the final touches are being made, the lists are being checked and double checked, and it is hoped that the material will be in the hands of the printer within the next week. Every effort is being made to make this Centennial Directory an outstanding one. Whether a similar directory will be published each year from now on will depend upon the desires of the membership.

THE COUNTY MEDICAL SOCIETY

The county medical society has been and still is the keystone upon which our Association is built. Membership in the Association is contingent upon membership in a county society and no member can become a member of the Association until he first joins the county society.

We wish to stress this point because of a recent occurence in one of our county societies. A certain physician had been dropped from the roll of the society for a definite reason. Subsequently, he applied to the society for reinstatement. By a unanimous vote, the members of the society refused to accept his application. The physician in question is attempting to make an issue of the matter.

Under our constitution, the county society was completely within its rights. Chapter IX, Section 4 of the By-Laws states "Each county society shall judge of the qualification of its members . . . . " But as this section continues " . . . . as such Societies are the only such portals to this Association and to the American Medical Association, every reputable and legally registered white physician whose work and conduct are of an ethical nature shall be eligible for membership." The next section reads, "Any physician who may feel aggrieved by the action of the society of his county in refusing him membership or in suspending or expelling him, shall have the right of appeal to the Council and finally to the House of Delegates."

In the case in question, the county medical society has done what the constitution gives it authority to do. Unless the physician in question wishes to make an appeal to the Council, no action may be taken by the Association.

SOUTHEASTERN REGIONAL CONFERENCE

Our Association is to have the privilege of serving as host to the Southeastern Regional Conference in Columbia during the early part of October. Two such conferences have been held, one last year and one several years ago, in Atlanta. To it will be invited officers and outstanding leaders from the state medical associations of Virginia, North Carolina, South Carolina, Georgia, Florida, Mississippi, Louisiana and Tennessee. In addition, invitations will be extended to some outstanding men, who are not physicians, interested in the medical problems of the people of the south.

It will be a two day conference. The first afternoon will be devoted to a discussion of the problems of the people in rural areas. The second morning will be spent in hearing different speakers, medical and non-medical, present the picture of health conditions as they exist in our southland. Following a luncheon, at which those in attendance will be guests of our Association, a round-table discussion will be held in an effort to find out the best means in which to meet and solve the problems which have been presented.

All members of the Association, particularly those who are officers of the Association or of county societies, or are members of special committees, are

invited to attend. Detailed information will be sent out in a News-letter.

TWO GOOD LOCATIONS

Recently we have had two requests for aid in securing the services of a physician.

The first is from Mr. Cyrus T. Mims of Harleyville, South Carolina who writes; "The Giant Cement Company of Harleyville will start production sometime in October this year. The manufacture of cement here will create more activities and we, the Ruritan Service Club of Harleyville, are faced with a serious problem. We have no Doctor in our community. The nearest one is twelve miles. We feel sure that your Journal can help us to locate a good physician."

The second letter asks us not to mention names, for justifiable reasons, but to insert the following notice: Wanted — A general practicing physician to locate in small community. Practice largely industrial. Hospital facilities nearby. Attractive arrangements for office and house can be made. Excellent opportunity for young doctor starting practice. Send inquiries to Editor of Journal. All inquiries will be handled on confidential basis."

If there is any member of the Association who knows of a physician to whom one of the propositions above might appeal, he is requested to ask him to get in touch with the Editor.

THE TEN POINT PROGRAM

ASSOCIATION SPONSORS BROADCASTS

Beginning September 1st, broadcasts of the series "Tell Me Doctor" sponsored by the South Carolina Medical Association, were commenced over five of the most powerful radio stations in the state. The stations, which are carrying the broadcasts as a public service, are WIS, Columbia; WCSC, Charleston; WTND, Orangeburg; WESC, Greenville; and WJMX, Florence. All, with the exception of the one at Orangeburg, are 5,000 watt stations. The series consists of five-minute transcribed programs which are being broadcast, one each day Monday through Friday, each dealing with some subject of health and the prevention or treatment of human ailments, such as any new progress on treatment of cancer, tuberculosis and infantile paralysis; the effects of smoking; liver disease; and the dangers of over-exercise after the age of forty.

The series was prepared under the supervision of the Michigan State Medical Society, and broadcast originally over radio stations in that state. Thev have been used also, with general approval of the profession and public alike, by the Medical Society of Virginia. A more recent edition of the "Tell Me Doctor" series is currently being broadcast by 22 stations in Michigan.

For some time we have explored the possibility of such an activity by the State Association in South Carolina and it is believed that the use of the series, supervised and used by the profession of these other states, is the best means that could have been devised for reaching the public generally through the medium of radio.

The series is scheduled to continue for a period of twenty-six weeks.

Plans are still in the making for publication of a column of health news in the press of the state, especially in the county newspapers, most of which are published weekly.

REGIONAL CONFERENCE IN COLUMBIA

The Southeastern Regional Conference sponsored by the AMA Council on Medical Service, will be held in Columbia during the month of October. The fifth and sixth have been tentatively set as the dates for the two-day meeting.

Dr. Julian Price of Florence is Chairman of the Committee in charge of the arrangements and plans for the Conference. Other members of the Committee, which was named during the annual meeting of the AMA in Chicago in June, are Dr. Walter B. Martin of Norfolk, Va., newly elected member of the Board of Trustees of the American Medical Association, Dr. H. B. Mulholland of Charlottesville, Dean of the Medical School of the University of Virginia, who succeeded Dr. Martin on the Council on Medical Service, and the Council's Secretary, Mr. Thomas A. Hendricks, of Chicago.

The Conference last year was held in Atlanta and was well-attended by doctors from the Southeastern states. The program included very valuable contributions made by speakers not of the medical profession, but sympathetic with its interests and its views.

South Carolina and the SCMA are fortunate in having the Regional meeting scheduled for this state. It should focus the attention of the public briefly on the profession's awareness of the problems at hand, and on its liberal outlook in the efforts being made toward their solution.

DISTRICT PR COUNCILS

As a means to facilitate further the development of the Ten Point Program of the South Carolina Medical Association, more particularly as it relates to Public Relations, a plan is under consideration for organizing a group in each district of the state to cooperate with the central office. According to this plan,

which has been used successfully in other states, there will be established in each district a District Council or Committee headed by the Councillor of the district, and including likewise in its membership one representative from each County Medical Society in the district, and a physician representative also from any county in which there may be no organized Society.

Meetings of the District Councils would be held twice a year and otherwise, on call when the occassion may arise. It is believed, and experience has proved in other places where the plan is already in operation, that the establishment of such a permanent group as a nucleus for the activities of the State Association, will add greatly to its effectiveness, and make much easier the task of co-ordination of the efforts of the profession in reference to any activity which the Association may decide to undertake.

The District Councils or Committees will be organized definitely for action and not for scientific discussions. They will of course, not interfere with any existing organizations or activities of any county, district or other organization within the profession.

The plan, if approved by the Council of the State Association, is expected to be put into operation this fall and it is hoped that the district groups will be organized and working smoothly by the first of the year.

THE NURSING SHORTAGE—ACUTE OR CHRONIC?

(Editorial, NEW YORK MEDICINE, June 5, 1948)

It is obvious there is something essentially lacking in present day nursing to account for the acute shortage that exists in hospitals throughout the country.

At the end of the war *all* civilian professional help had been drastically diminished. That was almost three years ago. In other feminine career branches the return to normal has been attained. In nursing alone, the void is still present.

This country possesses about 300,000 graduate nurses plus another 90,000 student nurses who do active nursing while in training. Of the former group about 50,000 are not doing active nursing. While it is expected that a certain percentage will be lost to the profession by assuming other duties, it is interesting to note that approximately 30% of students—for the past three years—have been dropping out before graduation. At the present time enrollments are not up to par; there is no waiting list for women clamoring to attend nursing schools.

In addition, those who left civilian nursing for the Armed Services did not readily return to their former hospital positions. To make matters worse the increased gross national income plus the further public awareness of health problems has resulted in a demand and need for nurses that exceeds even the normal supply. This is especially so since more people than ever before are seeking hospital care.

Some of the reasons or factors responsible for this lack of nurse personnel can be stated, although not all are subject to any immediate or sudden solution:

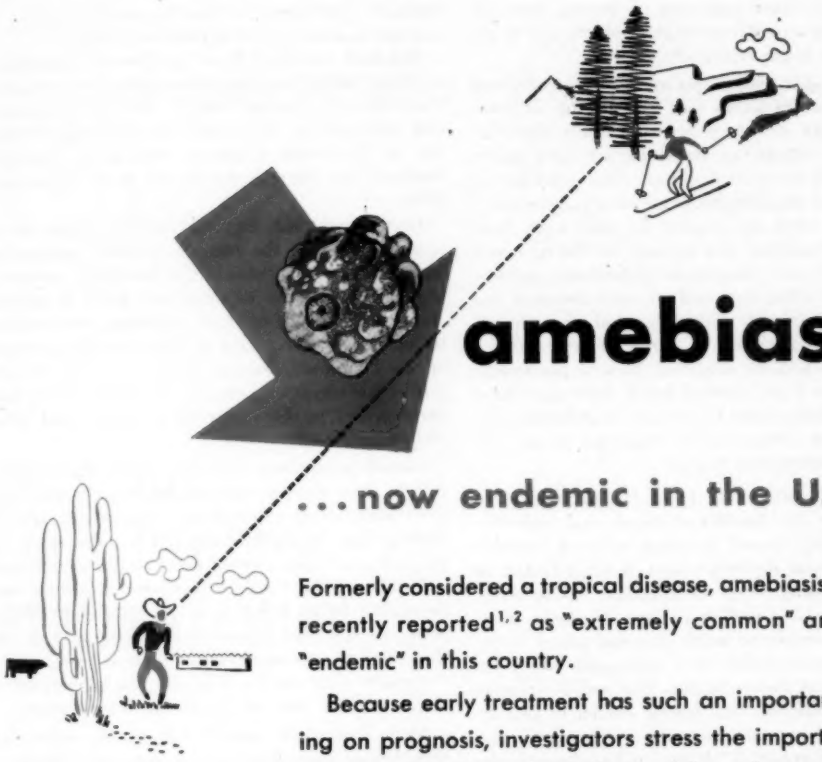
(1) The increased census of hospital admissions is the most obvious. Even if our nursing ranks remained intact the shortage would still exist. With gross earnings increasing since the war, plus the popularity of "hospital plans" it is entirely possible that routine health problems which normally could be treated at home without nursing care are now being admitted to hospitals.

It would be necessary in this instance for the doctor to evaluate his cases with greater care from the standpoint of necessary treatment before advising "routine admissions". It is exasperating to the physician to have nurses tied up on a mild upper respiratory infection, while a pneumonia case goes partially unattended for lack of sufficient help.

(2) Greater economic reward for nurses might help towards solving the situation. The national average pay of general duty nurses is between $170 and $175 per month, working between 45 to 48 hours a week with no overtime. The monetary figure is not particularly attractive. This is especially significant when one considers the amount of training and schooling required. Girls of equal age and background, but less training, in other fields can easily outstrip their nursing sisters in earned income, hours of work, and, what's more important, opportunities for advancement.

In the time-honored profession of nursing it takes years to become a supervisor and at that the economic advantage is not tremendous. Unfortunately the supervisor of a diaper-service in a department store can make the same salary. It is not fair to compare the salaries of professional work with those of routine business jobs. The inequality of professional gains, not only in nursing but in medicine and teaching as well, is quite well known if not wholly appreciated. Effort could be made to increase the graduate nurses pay. This has already been accomplished to some extent in certain city hospitals but the amount is not great. If there was at least a hope of attaining two important objectives (1) the ability to earn a substantial living in the future or (2) a realization that even though the subsequent income may be limited, at least the prestige and complete professional respect of the job would be worthwhile and completely satisfying. This latter is really a question of dignity and it deserves careful consideration.

For example, it is taken for granted that in the medical profession per se, internes, assistant residents and residents serve their time with little or no financial reward. This they do gladly. Outside of the necessity for every doctor to avail himself of this clinical experience there is a certain prestige attached to securing



amebiasis

...now endemic in the U. S.?

Formerly considered a tropical disease, amebiasis is more recently reported[1, 2] as "extremely common" and even "endemic" in this country.

Because early treatment has such an important bearing on prognosis, investigators stress the importance of prompt recognition through careful stool examination.

Destructive to the cysts of Endamoeba histolytica and especially valuable in sterilizing "cyst-carriers" is the high-iodine-containing amebacide, DIODOQUIN.

Diodoquin[3] "is well tolerated....It can readily be taken by ambulant patients and, therefore, eliminates the necessity of hospitalization."

SEARLE ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION **DIODOQUIN.®**

(5, 7-diiodo-8-hydroxyquinoline)

RESEARCH
IN THE SERVICE
OF MEDICINE

1. Chalgren, W. S., and Baker, A. B.: Tropical Diseases: Involvement of Nervous System, Arch. Path. 41:66 (Jan.) 1946.
2. Browne, D. C.; McHardy, G., and Spellberg, M. A.: Statistical Evaluation of Amebiasis, Gastroenterology 4:154 (Feb.) 1945.
3. Manson-Bahr, P.: Some Tropical Diseases in General Practice: "A Post-War Legacy." Glasgow M. J. 27:123 (May) 1946.

the job. In the sister profession of nursing there always has been a similar prestige involved, but in the last few years it has noticeably waned.

Anyone familiar with commissioned nurse personnel during the war can testify that by and large at home and abroad the nurse occupied a rather desirable position. She was on an equal footing with fellow officers as well as medical officers. The privileges of her station and standing by virtue of her professional training were taken for granted. In ward work there was a corps of enlisted men to carry out the necessary routine jobs of ward cleanliness, maintaining supplies, making beds, carting trays and the other thousand and one chores that go into efficient hospital management. Therefore the nurse's job of caring directly for patients, the sick and the wounded, became paramount. Her position as a professional being, with specialized talent and training could be properly maintained; and more important, because of the emphasis on *nursing*, the position commanded respect.

In civilian hospitals that type of dignity does not prevail. There are insufficient maids and orderlies. Nurses are again forced to spend a lot of valuable time carting linen, drawing charts, flushing basins, or arranging amusing floral decorations. While every profession is saddled with its disagreeable tasks, in no other does it become so much part and parcel of the work that it becomes difficult to distinguish where the training ends and slavery begins. That sort of situation is not one to influence fine young women to give up other means of economic security and happiness because of the oft-repeated "dignity and tradition of the American Nurse."

As a contributory factor, the attitude of certain doctors toward nurses could be somewhat modified. The tendency of more than a few to regard the nurse as some sort of semi-educated domestic or an automatic instrument-dispenser, could well be discouraged. The nurses position in relation to the doctor is a difficult one at certain times, and that difficulty is not lessened by the assumption of a patronizing attitude or manner.

It is to the benefit of all that the nursing profession maintain its high moral and professional standing. Anything that contributes to that end should be the *first* consideration. The situation, at present, is acute, and there is a danger of it becoming chronic.

FOUR TYPES OF SURGERY ABSORB MAJOR PART OF BLUE SHIELD DOLLAR

Appendectomies, tonsillectomies, obstetrical and gynecological procedures account for approximately sixty cents out of every dollar paid to physicians by Blue Shield Plans for surgical services.

Beyond these major cost items, according to preliminary studies made by the Blue Shield national office in Chicago, approximately seventy surgical procedures will absorb eighty-five per cent of all payments to physicians for benefits provided under the average surgical type of subscriber contract.

Standard reporting forms are being completed by the Blue Shield national office, with the expectation that complete actuarial data for 1948 will be reported and tabulated by the middle of 1949, thus fulfilling one of the major functions assigned to Associated Medical Care Plans at the time of its incorporation in 1946.

Payments for radiology and anaesthesiology services appear to be on the increase. Current explanations for this trend point toward the increasing number of physician specialists in these two fields of practice. Also, the incidence of these particular services seems to increase in direct ratio to the aging of a contract, or the Plan itself, during which time both the subscriber and physician become more aware of the benefits provided in the subscriber's contract and submit claims accordingly.

Female subscribers cost Blue Shield Plans approximately three times as much for surgical benefits as do male subscribers, while female dependents are only slightly less costly by comparison. Obstetrical and gynecological costs account for most of this difference.

Peculiarly, the female subscriber and female minor dependent have a high rate of utilization for appendectomies, while the female spouse has a lower than average utilization for the same service.

Female costs in the field of general surgery are above average, due principally to breast tumors.

Male dependents, chiefly minors, are more costly than female dependents of the same age, because of services such as herniotomies, circumcisions, fractures and dislocations. Boys seem to suffer exactly twice the number of broken bones as do girls.

MONTANA BLUE SHIELD RAISES INCOME CEILING TO $5000

Service benefits for subscribers to Blue Shield in Montana were extended recently by raising the income ceiling from $4,000 to $5,000. Any member having a gross family income under $5,000 per year will now receive all services provided by their membership certificate without being required to make additional payment to the physician.

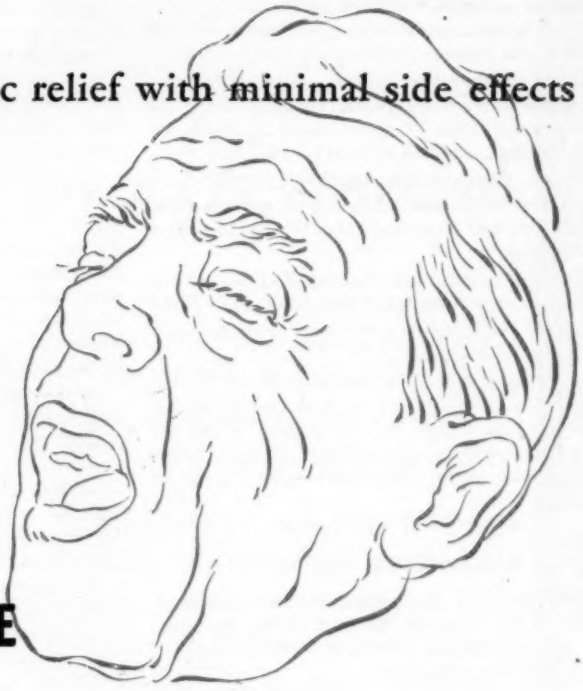
More than 400 participating physicians have agreed to this liberalization in a realistic attempt to match inflationary trends and rises in living costs by extending the range of eligibility for service benefits.

Blue Shield Plans in California and New Jersey have also raised their income limits for service benefits during recent months.

NON-PROFIT PREPAYMENT PLANS PASS 8,500,000 MARK IN SECOND QUARTER RECORD GROWTH

With most of the non-profit prepayment plans having reported their enrollment figures for the second quarter of 1948, the Blue Shield national office announced on August 1 that total enrollment had

symptomatic relief with minimal side effects



in
hay fever

PYRIBENZAMINE

During the last two pollen seasons, the effectiveness of Pyribenzamine hydrochloride in hay fever has been demonstrated repeatedly . . . 84% of 288 cases[1] – 78% of 588 cases[2] – 82% of 254 cases.[3]

Side effects are few and for the most part mild: – "No serious side effects have been noticed in any patients."[1] "In our opinion, reactions to Pyribenzamine are minimal and seldom necessitate stoppage of the drug."[4] The usual adult dose is 50 mg. four times daily.

1. ARBESMAN, C. E.: *N. Y. State Jl. of Med.*, 47: 1775, 1947.
2. LOVELESS, M. H.: *Am. Jl. of Med.*, 3: 296, 1947.
3. BERNSTEIN, ROSE and FEINBERG: *Ill. Med. Jl.*, 92: 2, 1947.
4. OSBORNE, JORDON and RAUSCH: *Arch. of Derm. & Syph.*, 55: 318, 1947.

PYRIBENZAMINE SCORED TABLETS, 50 mg., bottles of 50, 500 and 1000.
PYRIBENZAMINE ELIXIR of 5 mg. per cc., bottles of 1 pint and 1 gallon.

● CIBA PHARMACEUTICAL PRODUCTS, INC., SUMMIT, NEW JERSEY

Ciba

PYRIBENZAMINE (brand of tripelennamine)—Trade Mark Reg. U.S. Pat. Off. 2/1371M

reached an estimated 8,624,911 members.

Second quarter growth was approximately 700,000 members, the largest quarterly growth ever recorded.

"At the present rate of growth, we expect the non-profit plans to reach the 10,000,000 mark during the first quarter of 1949," reported Frank E. Smith, director of the Blue Shield national organization.

Michigan Medical Service reported 1,052,736 members enrolled at the end of the second quarter, 1948, becoming the first Blue Shield plan to pass the million member mark.

Organized in 1939, Michigan Medical Service began operations in 1940, being one of the oldest of the Blue Shield Plans, and for many years the largest such Plan in the United States.

"According to our enrollment records, we expect United Medical Service in New York City to become the second Plan to pass the million mark before the end of 1948," declared Lynn Doctor, assistant director and statistician for the Blue Shield national organization

---

MALPRACTICE ACTIONS

(Extracts from an address by Dr. Louis J. Regan, at the General Meeting of the Seventy-fifth Annual Session of the California Medical Association, Los Angeles.)

In all his life a physician suffers no greater shock than that of being sued for malpractice. Not uncommonly a defendant physician breaks, nervously and physically, under the stress and strain of a malpractice trial.

When a patient claims that he has suffered injury because his physician failed to care for him in a manner consistent with the usual and ordinary degree of skill and care commonly possessed and exercised by other reputable practitioners in the locality, he is accusing that physician of malpractice.

Any patient may bring a malpractice claim against any physician who has treated him. It is an easy charge to make; it is increasingly difficult to defend against such a charge.

World War I Experience

Following World War I, the malpractice claims incidence rose sharply, reaching epidemic proportioons during the depression decade of the 1930's. Four thousand doctors of medicine were sued for malpractice in the United States in 1937.

The situation now threatens to become worse. The ground work is laid. Most of the people in this locality know about malpractice. They read in the newspapers and hear by word of mouth of judgments recovered by patients. The community as a whole is conditioned to the evil. Even a reference to an excellent hospital as a "murder mill" occasions no apparent shock. The wave of misunderstanding and ill-will engendered by the great number of malpractice actions has had a cumulative effect, with increasing injury to the professional reputations of the individuals involved and serious deterioration of medical prestige in general. There is gathering in the minds of the public the idea that protection is needed against the profession. Will it be surprising if they seek it at the hands of the government?

Unjust Accusations

A further and a serious manifestation of the alarming malpractice trend is seen in the growing demand that criminal prosecution be initiated when to the uninformed lay view there appears to be some relationship between the death of a patient and the quality of professional attention which had been rendered in the particular case.

A physician should and must care for every patient with meticulous attention to the requirements of good medical practice. If he does so he cannot be justly charged with malpractice, but no course of conduct on his part will ward off the unjust accusation; and it must be recognized that many of the malpractice claims which are brought in this locality are not meritoriously founded. Furthermore, the defendant, in the majority of these cases, is not on the charlatan level but to the contrary, is among the most reputable of the group.

Every patient with a less than perfect end-result is a potential malpractice claimant. These days, when there is disappointment with the result, there will usually be some discussion whether to sue the doctor or not. Very little, if any, additional stimulus is required to precipitate a suit.

Idealism and Practicality

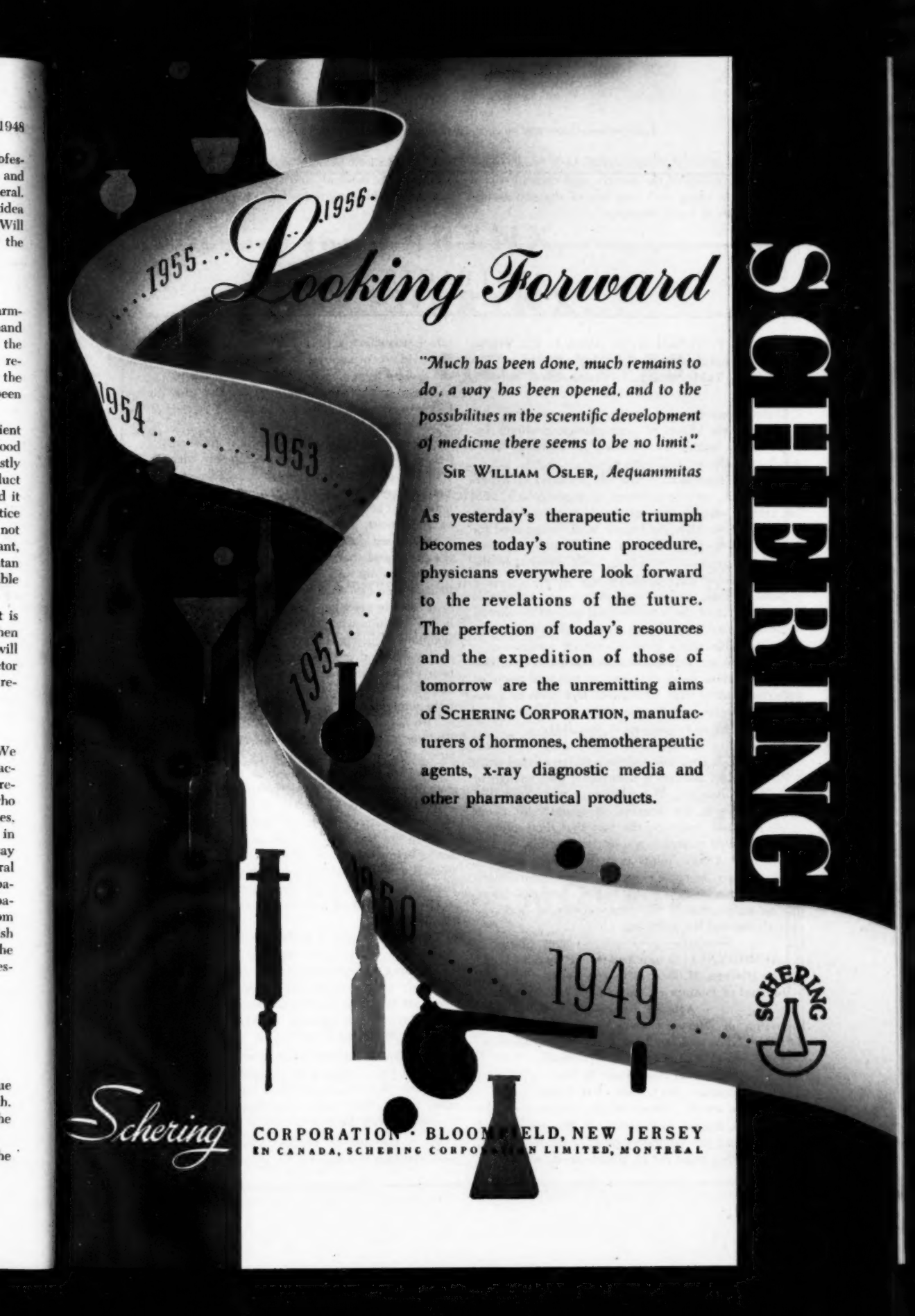
No one of us is immune to a malpractice action. We have been right to expect that the physician who practices good medicine, who renders sufficient and careful attention in all the circumstances of his cases, who deals with his patients fairly and honestly at all times, would be safe from the charge that he is lacking in skill and knowledge or in professional integrity. I say that we were right in our attitude; that it was natural and proper, in harmony with the unselfish preoccupation of the physician with the well-being of his patient. But it is time for a change,—a change from naive idealism to aggressive practicality, if we wish to protect our professional reputations and to stay the deterioration in the public's confidence in the profession.

PEE DEE SOCIETY PLANS

(Other Districts Please Note.)

The Pee Dee Medical Society has planned a unique program for its regular meeting on September 16th. The meeting place, which is rotated, this month is the capital of the Pee Dee, Florence.

In addition to the members and their guests, the


SCHERING
Looking Forward
1956
1955
1954
1953
1951
1950
1949
"Much has been done, much remains to do, a way has been opened, and to the possibilities in the scientific development of medicine there seems to be no limit."
SIR WILLIAM OSLER, Aequanimitas
As yesterday's therapeutic triumph becomes today's routine procedure, physicians everywhere look forward to the revelations of the future. The perfection of today's resources and the expedition of those of tomorrow are the unremitting aims of SCHERING CORPORATION, manufacturers of hormones, chemotherapeutic agents, x-ray diagnostic media and other pharmaceutical products.
SCHERING
Schering
CORPORATION · BLOOMFIELD, NEW JERSEY
IN CANADA, SCHERING CORPORATION LIMITED, MONTREAL

pharmacists of the Pee Dee section have been invited to attend as guests of the Society, and each physician was asked to bring with him one of the non-professional leaders of his community.

Other Society guests also have been invited and a meeting of medical and non-medical men in an atmosphere of general good-will is planned.

ABSTRACTS

Slocum, H. C., O'Neal, K. C., Allen, C. R.: Neurovascular Complications from Malposition on the Operating Table. Surg., Gynec., Obst. 86:729, June, 1948

During anaesthesia a patient becomes more susceptible to the effects of unphysiologic positions because he is unable to complain of postural insults which normally he would not tolerate.

Brachial plexus injuries may be produced by hyperextending the arm on a board, as is sometimes done for axillary surgery, for infusions, or to make room for an assistant. Shoulder braces, while being used for Trendelenberg position, cause injury unless placed over the bony acromioclavicular joint rather than the soft structures of the supraclavicular space.

Radial, ulnar, and median nerves are vulnerable when the arm of the anaesthetized patient is allowed to press against firm objects such as the edge of the operating table and a fixed anaesthetic screen.

Leg braces and stirrups used with lithotomy position may cause pressure on the common peroneal nerve or saphenous nerve with subsequent foot drop or paraesthesia. The degree of nerve paralysis varies in time from a few hours to permanent disability.

Any position causing nerve injury may also cause blood vessel damage and ischemia to the related parts if the abnormal position is maintained long enough to cause tissue damage. The relation of nerve and vascular injuries to the number of anaesthetics given yearly is small; however, the fact that these injuries are preventable makes even a few regrettable.

This type of nerve injury is treated principally with physio-therapy. In some cases of vascular injury, sympathetic nerve block is valuable. Prevention of injury due to malposition is the responsibility of both the anaesthetist and the surgeon.

ACRODYNIA: A new treatment with BAL
Lee Bivings, M. D. and George Lewis, Ph.D., Journal of Pediatrics, Jan. 1948 (Vol. 32 #1). Atlanta, Georgia
Ingestion of Mercury as a Probable Cause of ACRODYNIA, and Its Treatment with Dimercaprol (BAL), Report of two cases.
Samuel E. Elmore, M. D.
Pediatrics, May, 1948 (Vol. 1 #3).

These two articles present in the literature for the first time a logical explanation of the etiology of acrodynia, and give laboratory proof of the hypothesis. In addition they point out an apparently dramatic cure which was effective in the three cases presented within eleven days, in contrast to the protracted course that the disease has characteristically run in the past.

These articles also stress the fact that this disease is relatively common in the piedmont section of the southeastern U. S. A.

The symptoms are also stressed as follows:

The disease occurs most commonly during the second half of the first year. It is characterized by gradual onset of fretfulness, restlessness, insomnia, and anorexia. The hands and feet become deep pink, are swollen, moist, cold, tender, and tend to desquamate, a generalized dusky maculopapular rash appears over the body, and there is profuse sweating. The muscles are very flabby and reflexes are diminished. The patient is often described as being "floppy". Photophobia is almost always severe, and as Dr. Bivings points out in his case this was due to an iritis, and was the last symptom to disappear after treatment. The gingivae are swollen and teeth often fall out. Hypertension and tachycardia often are present. Itching of the hands and feet is so severe that often permanent scars result from scratching.

The authors mention that Dr. J. Warkany of the Children's Hospital of Cincinnati first discovered mercury in the urine of these patients.

Mercury was demonstrated in the urine of the 3 patients reported in these two articles in amounts more than 10 times normal. A history was obtained in one case that the infant was given calomel and rhubarb by the family physician in 12 doses some weeks before admission. The other two cases had been given "a few" teething powders, each subsequently found to contain 3.5 mg of mercurous chloride (calomel) less than a week preceeding the onset of the illnesses.

Treatment consisted of freeing the patients of mercury by use of the new compound BAL.

The drug was given in dosage of 2.5 to 3 mg. per Kg. body weight every four hours for 48 hours then every six hours for 24 hours, then every 12 hours for seven days. (Each injection as BAL in oil 10% with novocain 2%).

Reduction in amount of mercury in the urine occurred in 6 to 9 days in the 3 cases. Symptoms began to subside also on an average of the fifth day of treatment and patients were considered completely well by the eleventh day.

(One is tempted to wonder why acrodynia is not more common if calomel is the causative factor. Ed.)

about the LARYNX, the PHARYNX... and CIGARETTES

Here is the simple reason why many leading nose and throat specialists suggest "Change to Philip Morris."*

The sensitive tissues of the upper respiratory tract are often affected adversely by the irritants in the smoke of ordinary cigarettes.

Philip Morris, on the other hand, are specifically processed to *minimize* such irritants . . . the only one of all leading cigarettes to offer this advantage.

Why not give your patients the benefit of this proved** superiority . . . why not suggest Philip Morris. Many leading doctors make it a point to say to their patients who smoke . . . *"Change to Philip Morris Cigarettes."*

PHILIP MORRIS

Philip Morris & Co., Ltd., Inc.
119 Fifth Avenue, New York

ARE YOU A PIPE SMOKER? . . . We suggest an unusually fine new blend—COUNTRY DOCTOR PIPE MIXTURE. Made by the same process as used in the manufacture of Philip Morris Cigarettes.

*Completely documented evidence on file.

**Reprints on request:

Laryngoscope, Feb. 1935, Vol. XLV, No. 2, 149-154; Laryngoscope, Jan. 1937, Vol. XLVII, No. 1, 58-60; Broc. Soc. Exp. Biol. and Med., 1934, 32-241; N. Y. State Journ. Med., Vol. 35, 6-1-25, No. 11, 590-592.

DEATHS

CHARLES WILLARD MIMS

Dr. Charles W. Mims, 30, died suddenly from a heart attack on the morning of July 24, in Greenville. He was driving his car in answer to a call when he was stricken.

A native of Florence, Dr. Mims received his education in the schools of that city and at Furman University and was graduated from the Medical College of the State of South Carolina in 1943. He served his interneship at the Greenville General Hospital and had practiced in Greenville since that time.

Dr. Mims is survived by his widow and one son, Charles Willard Mims, Jr.

NEWS ITEMS

The South Atlantic Association of Obstetricians and Gynecologists announces the establishment of 'The Foundation Prize.' Authors of papers on Obstetrical or Gynecological subjects desiring to compete for the prize may obtain information from Dr. E. D. Colvin, Secretary-Treasurer, 1259 Clifton Road, N. E., Atlanta, Ga.

Druggists and the medical profession were urged today by the Federal Security Agency's Food and Drug Administration to return all stocks of Siliform Ampuls to the manufacturer, The Heilkraft Medical Company, Boston, Mass. This injection drug, which should be sterile, is potentially dangerous since samples collected on the market contain living organisms. Siliform is injected by some physicians and osteopaths in the belief that it will relieve patients suffering with rheumatism as claimed by the manufacturer. The Food and Drug Administration found the contaminated samples after a routine inspection at the Heilkraft factory disclosed that the Siliform Ampuls had been manufactured without sterilization. Intensive recall efforts by the manufacturer and the Food and Drug Administration for the past two weeks have not brought in all of the contaminated stocks. The article, which moves slowly, was shipped to 37 states from Maine to California and later was redistributed by wholesalers who cannot trace many of their sales. Some going back as far as 1946 have been found on the market. These ampuls may be in the hands of doctors, hospitals, clinics, and retail and wholesale druggists.

THE 5 SOUTHEASTERN STATES NEED 106 VA PHYSICIANS

Branch Office No. 5 of the VA, Atlanta 3, Ga. has appealed to the internists of the United States to help them staff the 17 hospitals under their jurisdiction. There are abundant opportunities for physicians who are qualified in internal medicine and the subspecialties to head services and sections in these hospitals which are located throughout the southeast from Johnson City, Tennessee to Tuscaloosa, Alabama, and from Memphis, Tennessee to Coral Gables, Florida.

In addition to openings for specialists, there are also abundant opportunities for young men who have finished their residency training, and, who now need two or more years of preceptorship training, under certified internists, with teaching ability, where they may make their final preparation in an academic atmosphere for completion of the American Board requirements.

The organization plan of all of our hospitals follows the outline prepared by the Council on Medical Education and Hospitals published by the American Medical Association (J.A.M.A. 113:794, Aug. 26, 1939). Emphasis is placed on bedside instruction, teaching rounds, seminars, clinical-pathological conferences, demonstrations and lectures. All of our hospitals are affiliated with nearby medical schools for educational purposes and twenty qualified Branch Consultants, covering every specialty in Medicine and Surgery, pay periodic visits to the hospitals for teaching and supervision of the professional service in their respective fields.

All of our hospitals possess large well-equipped laboratories and libraries. All new modern textbooks and an average of 100 current journals are available to the staff doctors. Opportunities for research and study are splendid. Every possible consideration is given to the encouragement and stimulation of clinical investigation and professional advancement. Attendance at conventions and postgraduate courses is approved on official leave. Excellent bibliographical and medical illustration service is available to all of our doctors upon request.

Salaries, while they are not high, the upper limit being $11,000.00 per year, are adequate for those physicians who are primarily interested in professional advancement, an opportunity to contribute to the medical literature, or who have an overwhelming desire to practice top-flight medicine in an atmosphere of professional freedom.

There are other advantages to participation in the new Department of Medicine and Surgery of the VA including 30 days of annual leave and retirement privileges, but the greatest inducement of all is the ability to practice first class medicine without being hampered by the inevitable consideration of the cost of medication, special examination and laboratory procedures, consultation service or lengthy hospitalization, such as inevitably affects the character of professional services rendered by the civilian physician in private practice. Satisfaction in the splendid service rendered to worthy veterans and their heartfelt gratitude expressed to the physician undoubtedly plays a great part in the professional morale so high in our hospitals. There has been a great improvement in every phase of hospital service since the renaissance spear-headed by Dr. Paul R. Hawley and promoted, expanded, and brought into full-flower through the efforts of our present Chief Medical Director, Dr. Paul B. Magnuson.

Dr. Wallis D. Cone has announced the opening of his office for the practice of urology at Tuomey Hospital, Sumter.

Dr. Charles E. Carpenter is now associated with his brother, Dr. William McN. Carpenter, in the practice of ophthalmology and otorhinolaryngology at 202 East North Street, Greenville.

Dr. Ethel M. Madden of Columbia has been certified by the American Board of Pediatrics. The examinations were held in Cleveland, Ohio, in April, 1948.

Dr. John C. Bonner is now associated with Dr. B. Owen Ravenel in the practice of pediatrics, 95 Rutledge Avenue, Charleston.

Dr. Frank Woodruff, formerly of Greer, is now assistant resident in obstetrics and gynecology at General Hospital, Greenville.

BIRTH ANNOUNCEMENT

Dr. and Mrs. W. J. Jenkins of Olanta are receiving congratulations upon the birth of a daughter, Kathleen Louise, on July 20th.

WOMAN'S AUXILIARY
SOUTH CAROLINA MEDICAL ASSOCIATION

President: Mrs. P. M. Temples — Publicity Secretary: Mrs. William H. Folk

Dr. R. B. Durham, Columbia, South Carolina has appointed the following physicians to serve this year on the Advisory Council of the Woman's Auxiliary to the South Carolina Medical Association:

Dr. Vance W. Brabham, Sr., Orangeburg, S. C., Chairman
Dr. William H. Folk, Spartanburg, S. C.
Dr. J. L. Sanders, Greenville, S. C.
Dr. W. L. Pressley, Due West, S. C.
Dr. J. A. Siegling, Charleston, S. C.
Mr. M. L. Meadors, Florence, S. C.

We feel sure that under these physicians' capable leadership the work of our Auxiliary will continue to progress.

MEETINGS—

Mrs. Powell M. Temples, President, Woman's Auxiliary to the South Carolina Medical Association, will be guest speaker at luncheon meetings of the Greenville and Anderson Auxiliaries in September. Mrs. William H. Folk, Publicity Secretary, will accompany Mrs. Temples to these scheduled meetings.

SOUTHERN MEETING:

Preparations are being completed for the annual meeting of the Woman's Auxiliary to the Southern Medical Association which will convene in Miami, Florida, October 25-27, 1948. Headquarters will be at the Columbus Hotel.

Mrs. Olin S. Cofer, President, from Atlanta, Georgia, will preside. Mrs. Cofer is very pleasantly remembered by members of the Woman's Auxiliary to the South Carolina Medical Association as she was an honored guest at our annual convention held in Charleston, S. C.

Mrs. R. F. Stover, Miami, Florida will be Convention Chairman.

Physicians wives planning to attend the Southern Meeting are asked to register as soon as possible after arriving in Miami. Mrs. Temples will appreciate your advising her if you plan to attend the Convention.

Mrs. David F. Adcock from Columbia, S. C., immediate past state president, has been invited to give the Response for Auxiliary Members at the Convention of the Woman's Auxiliary to the Southern Medical Association.

BOOK REVIEWS

Textbook of the Nervous System—A foundation For Clinical Neurology—H. Chandler Elliott, M.A., Ph.D.—J. B. Lippincott Company.

This is a new technique for the preparation of a text on Neurology. Beginning Part I with an explanation of the purpose of this new idea, Dr. Elliott has made a big step forward in helping the medical student and the graduate student to understand the mechanism of the nervous system in relation to the practice of medicine.

The authors' diagrams, which are numerous and clearly labeled, are appropriate pillars to rest on as the text is studied.

Part I seems to be quite adequate in its purpose of laying a ground-work for the students' clearer understanding of the study of neurology.

In Part II the nervous system is considered in detail with sufficient wordage on each part from the neuron up to the cerebrum and cerebellum as complete units.

Of special interest to the reviewer was the set of photographs showing sections of the brain and accompanied by key drawings to point out the areas of gross neuroanatomy.

All in all the book is about as "refreshing" a coverage of the subject as the reviewer has encountered. It is highly recommended to the medical student and surgeon alike.

Well-paying unopposed general practice available in small South Carolina town. Will introduce. Without cost to right man. New office building as well as dwelling house (next door). Available October 1, 1948. Practice consists of farm and industrial workers.

Apply: Mrs. Claude G. Watson
S. C. Medical Association
105 W. Cheves Street
Florence, S. C.

ANTI-MALARIA DRUG EFFECTIVE IN TULAREMIA, UNDULANT FEVER

Atabrine the drug which, developed in Germany, was the principal reliance for malaria control in the Pacific and Mediterranean theaters during the war, may be effective in controlling undulant fever and tularemia, a Vandalia, Ill., physician reports.

Writing in *The Illinois Medical Journal*, official publication of the Illinois State Medical Society, D. H. Ecke, M.D., of Vandalia, and Dean H. Ecke of the Illinois Natural History Survey, Urbana, described eight cases of tularemia and four cases of undulant fever which Dr. Ecke successfully treated with atabrine.

Tularemia, which has become increasingly important in recent years, is usually transmitted to man from infected wild rabbits, while undulant fever, or brucellosis, is contracted either by handling diseased cattle, hogs, sheep or goats or eating unpasteurized dairy products from herds infected with contagious abortion or Bang's disease, as brucellosis is known in cattle.

The tularemia cases included in the report were all treated up to April, 1948. Typical was a 65-year-old woman who, at the time of examination by Dr. Ecke, was "suffering with fever and chills."

"She had an ulcer on her right thumb, and the lymph gland under her right arm was considerably enlarged and very tender," the report disclosed. "These symptoms strongly suggested a case of ulcero-glandular tularemia.

"Further inquiry brought out some important facts:

"She had dressed some freshly killed wild rabbits (cotton-tails) about three weeks previously—about a week before her illness started. Two or three days after she had dressed the rabbits, a primary papule (sore) developed on the right thumb. This papule would not heal and developed into the persistent ulcer noted above."

Dr. Ecke prescribed atabrine to be taken three times daily for five days.

"At the end of the fifth day, she reported back for examination," the report continued. "She said that the chills and fever had left on the second day with no recurrence. Examination showed lymph glands normal and the ulcer nearly healed, with no infection evident. She has had no recurrence of the symptoms since."

Similarly, the report stated, seven other patients were treated "who showed the typical symptoms of ulcero-glandular tularemia as described above."

"Every case was traced to the handling of rabbits a few days before," the report added. "The characteristic chain of symptoms followed. Without exception, atabrine produced a favorable response within one to three days and not one case required further treatment after the fifth day. In none of these cases has there been a recurrence of symptoms."

Dr. Ecke employed the same treatment in four undulant fever cases, diagnosis of which in three cases was confirmed by laboratory study of blood. In these cases, all symptoms of undulant fever disappeared within five days after atabrine was started. One patient relapsed after almost five years, but recovered after two or three days of atabrine treatment.

Although the organisms responsible for brucellosis, or undulant fever, have been known for more than 60 years, there has been no positive treatment for the disease. The sulfa drugs and penicillin proved disappointing and so did streptomycin, although recently a combination of streptomycin and sulfadiazine has been reported successful. Against tularemia, streptomycin has been much more successful. However, the drug has its limitations. It is expensive and it may produce unfavorable side reactions, such as damage to cranial nerves, causing loss of balance. Also its continued use may produce a resistance against itself rendering it ineffective if needed at some later date.

Commenting on the series of patients treated with atabrine for undulant fever and tularemia, Dr. Ecke painted out that "none of the patients was able to afford streptomycin nor was the drug available in most cases."

"Experimentation with atabrine has given us very favorable results in all cases of tularemia and undulant fever in which it was used," the report concluded. "It is now a question of whether this treatment will give positive results when extensively used.

A. M. A. MEETING

Registrations and hotel reservations are now being accepted for the second annual Interim Meeting of the American Medical Association at St. Louis, November 30 to noon, December 3, 1948.

On the eve of the Interim Meeting, Saturday, November 27, the first national Medical Public Relations Conference will be held under sponsorship of the A. M. A. at the Statler Hotel.

Planned to be especially valuable to the general practitioner, the Interim Session will offer lecture meetings, conducted by medical leaders on conditions most often seen in daily practice. Subjects to be discussed include diabetes, heart disease, cancer, poliomyelitis, obstetrics, pediatrics, dermatology, genito-urinary conditions, hypertension, anesthesia, tuberculosis, jaundice, laboratory diagnosis, x-ray diagnosis, and physical medicine as applied to the treatment of arthritis.

Diagnosis and treatment will be stressed in a wide variety of clinical conferences, which will be correlated with the lecture meetings. Leading practitioners from all sections of the nation will conduct these conferences.

Evening programs will feature distinguished speakers, the award of the general practitioner medal, and fun. Entertainment will be provided, free of charge to physicians and their guests of course, by stars of the amusement world.

A scientific exhibit with nearly 100 displays will show clinical and pathological material on subjects dealt with in the clinical conferences.

Approximately 115 leading firms will display technical exhibits, which will include new products, equipment, and medical publications. All exhibits will be open from Tuesday at 8:30 a. m. to Friday noon, November 30 to December 3.

Papers will be read at the General Scientific Meetings in the St. Louis Opera House from 9 to 10 a. m. and from 2 to 3 p. m. each day. At least six demonstration units are planned for each half day in the Scientific Exhibit from 10:30 a. m. to 12 noon, and from 3:30 p. m. to 5 p. m. Small rooms will be pro-

vided for these demonstrations and provision is being made so that physicians can take all the notes they wish in comfort.

Intermissions in the program will be from 10 to 10:30 a. m., 12 noon to 2 p. m., and 5 p. m. to 6 p. m. each day.

Officers and members of the House of Delegates will stay at the Statler Hotel. Those attending the Medical Public Relations Conference will stay at the Lennox Hotel.

A registration form which enables the physician to save time by securing a registration card in advance is appearing in The Journal of the American Medical Association every other week until the Interim Meeting. A convenient blank for making reservations at a number of St. Louis' best hotels, which are within easy walking distance of the St. Louis Auditorium, is also printed in The Journal.

All reservations must be cleared through the Chairman, Subcommittee on Hotels, American Medical Association, Hotel Reservation Bureau, 1420 Syndicate Trust Building, St. Louis 1, Mo., and must be received before November 9, 1948.

JOURNAL ANALYZES USE OF STREPTOMYCIN IN TREATMENT OF TUBERCULOSIS

"Streptomycin provides an excellent medium of treatment for certain types of tuberculosis, says the current issue of *Radiology*, but adds that it "should be withheld in cases of minimal tuberculosis and in those in which conventional treatment offers reasonable prospects of good result."

The Journal *Radiology*, says editorially that streptomycin "should be used in association with accepted therapeutic measures and not as a substitute for them."

"As a matter of fact," the editorial says, "a healthy tendency is at present developing to use the drug only as an adjunct rather than as a definitive treatment in all types of tuberculosis except the miliary and meningitic forms, to apply it briefly for three, four or six weeks, at the most opportune time, with other appropriate therapy."

The article states that despite the tremendous volume of careful work by research scientists, "the disease has remained persistently resistant to attack," adding: that "no specific and no cure has yet stood the test of time, although hundreds have been offered. Of these, only one has shown the capacity to influence the disease in man—streptomycin."

The editorial states that the new antibiotic drug "should be tried in all cases of miliary tuberculosis, for more than half of such patients will be alive, and a substantial number of them will be free from clinical, x-ray, or laboratory signs of disease, six to twelve months after discontinuation of the drug."

Continuing, the editorial says in part:

"The use of the drug in tuberculosis meningitis is mandatory, for about one-fourth of all patients have survived from six to twelve months after treatment, and the majority of these are free from detectable signs of tuberculosis.

"Extrapulmonary tuberculosis is under detailed study, but already it appears that tuberculous laryngitis and bronchitis are benefited by the use of streptomycin in about 85 per cent of cases, even though the parent lesion in the lungs may show no improvement.

"Streptomycin is used profitably at times to enhance the patient's chances from collapse therapy and as a prophylactic in surgical treatment, particularly pulmonary resection.

"In the face of these relatively good results, a disturbing fact is that the average case of fibrocavernous tuberculosis has been found to respond poorly to streptomycin, and this type represents three-fourths of all cases of the disease. It is still under intensive study."

OUR ADVERTISERS

We wish to call to the attention of our readers the names of those firms which have contracts with us for advertising during 1948:

Abbott Laboratories
Allen's Invalid Home
American Meat Institute
Ayerst, McKenna & Harrison, LTD.
Blackman-Walton Sanatorium
Borden Company
Brawner's Sanitarium
Broadoaks Sanatorium
Brook Haven Manor Sanitarium
Camel Cigarettes
Carolina Rest Home
Charleston Medical & Surgical Equipment Co.
Ciba Pharmaceutical Products, Inc.
Coca-Cola Company
Coleman & Bell Co.
Columbia Surgical Supply, Inc.
Cook County Graduate School of Medicine
Dixon Drug Co.
Eaton Laboratories
The Edgewood Sanitarium
Eli Lilly Company
Estes Surgical Supply Co.
The Farm
Holland-Rantos Company
Hoye's Sanitarium
L. & B. Reiner, Inc.
Mead Johnson & Company
Merck & Company, Inc.
National Dairy Products Company
National Drug Company
Nestle's Milk Products
Parke, Davis & Company
Philip Morris Company
Physicians Casualty Ass'n.
Pinebluff Sanitarium
Powers & Anderson of S. C., Inc.
Rexall Drug Company
Rhem's Drug Company
S. H. Camp & Company
Schering Corporation
G. D. Searle & Company
Smith, Kline & French Laboratories
Southern Dairies
Spencer, Incorporated
E. R. Squibb & Sons
U. S. Brewers Foundation, Inc.
The Upjohn Company
Wachtel's Physician Supply Co.
The Wander Company
Waverley Sanitarium, Inc.
Webster-Chicago Corporation
Westbrook Sanatorium
White Laboratories
Winchester Surgical Supply Co.
Winthrop-Stearns, Inc.
Wyeth, Incorporated